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Facilities Planning 1981 (FP 81) is a new approach to guidance on facilities planning. FP 81 is one of a series of efforts which are underway to simplify, deregulate, and delegate the construction grants program. It represents a commitment to reduce the requirements of the facilities planning process, to publish new requirements only once during a fiscal year, to avoid imposing retroactive requirements (with the exception of those specified by law), and to facilitate delegation to the States of the review and approval of facilities plans.

The purpose of FP 81 is to provide States, grantees, and the Environmental Protection Agency (EPA) regional offices with everything to be said about facilities planning in a single document. The requirements in this document apply to all step 1 grants awarded during fiscal year 1981. It is intended that no additional requirements will be applied during the life of those facilities planning processes initiated in fiscal year 1981 -- even if the original step 1 grant is amended in subsequent fiscal years.

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FOREWORD

Facilities Planning 1981 (FP 81) is a new approach to guidance on facilities planning. FP 81 is one of a series of efforts which are underway to simplify, deregulate, and delegate the construction grants program. It represents a commitment to reduce the requirements of the facilities planning process, to publish new requirements only once during a fiscal year, to avoid imposing retroactive requirements (with the exception of those specified by law), and to facilitate delegation to the States of the review and approval of facilities plans.

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Once a year, prior to the start of the new fiscal year, an updated bound volume of complete facilities planning guidance will be published. The updated guidance will include any modifications in requirements which will apply only to new step 1 grants -- those initiating the facilities planning process -- which are awarded during that new fiscal year. Of course, no grantee will be precluded from voluntarily applying future simplified procedures to step 1 processes which are already underway.

To simplify the process, several procedural changes were made in facilities planning for fiscal year 1981. Changes are highlighted by a heavy line in the margin of facilities planning 1981. Most relate to block-by-block analysis for septic tanks, infiltration/inflow analysis, multiple purpose projects, and land treatment. As additional program improvements are developed, they will be reflected in subsequent annual facilities planning documents.

I encourage all who use Facilities Planning 1981 to let us know of any changes you believe would improve its usefulness. Send any comments or suggestions to the Director, Facility Requirements Division; Office of Water Program Operations (WH-595); Environmental Protection Agency; Washington, D.C. 20460.

Henry L. Longest II
Henry L. Longest II
Deputy Assistant Administrator
for Water Program Operations

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*section includes simplified requirement

INTRODUCTION AND USER GUIDE

This book describes the Federal regulations, policies and procedures that apply to Step 1 facilities planning under the EPA construction grants program. The chapters are organized in a process sequence. By following the sequence and completing the requirements for each stage, you will be able to get your facilities plan approved and your project under design as fast as possible.

Procedural Flow Chart

Figure 1 is a procedural flow chart that illustrates the principal stages of the Step 1 grant process. Note that each major element on the chart corresponds to a chapter of text. The chart relates each chapter of this book to the overall grant process.

The chart also lists the specific parts, sections, and subsections of the Code of Federal Regulations (CFR) that apply at each stage in the process. This is important because many sections of the principal construction grants regulations do not apply to a Step 1 grant. The construction grants regulations are contained in 40 CFR Part 35 Subpart E.

Certain regulations other than those in Part 35 Subpart E specify activities to be performed as a part of a Federal grant program. A copy of the construction grants program regulations applicable to your facilities plan will be included in your grant application package. If you find you need other regulations, contact your project reviewer.

Reference to Federal Regulations

This book is written to help you meet the requirements of the regulations. It is important that you read these regulations.

References to regulations in this book are made by citing specific portions of the appropriate title of the Code of Federal Regulations (CFR). Virtually all regulations applicable to the Step 1 process are contained in Title 40 (Protection of the Environment); therefore, most references cite only the specific subdivisions of the Title 40 regulations.

For example, a citation for "35.917-1(a)" means subsection 917-1(a) of Part 35 of Title 40, while "35 Appendix A.8.a." refers to subsection 8.a. in Appendix A to Subpart E, Part 35 of Title 40.

An example of a citation for a part of Title 40 other than Part 35; e.g. Part 6, would be: 6.507. References to regulations other than in Title 40 include citation of the appropriate title. For example, "10 CFR 2.700" is found in Title 10 Part 2.

When regulations are first published in the Federal Register they may be cited by volume and page; e.g., 45 FR 2186.

Other Guidance

A number of program requirements memoranda (PRMs) and program operations memoranda (POMs) have been discontinued because their provisions are contained in the text. They are listed in Appendix D. While the text is intended to incorporate all essential policies and procedures other than referenced regulations, certain important technical publications have been cited. You can get copies of these documents from either the State or EPA.

Appendixes and Index

A key word index and references are included in the appendixes at the end of this book.

The appendixes include reprints of the preambles to the construction grants regulations. These preambles discuss the development of the regulations.

Also listed are applicable parts and subparts of the Code of Federal Regulations, other EPA publications that cover various subjects related to Step 1 grant activities, discontinued PRMs and POMs, and addresses of key Federal offices.

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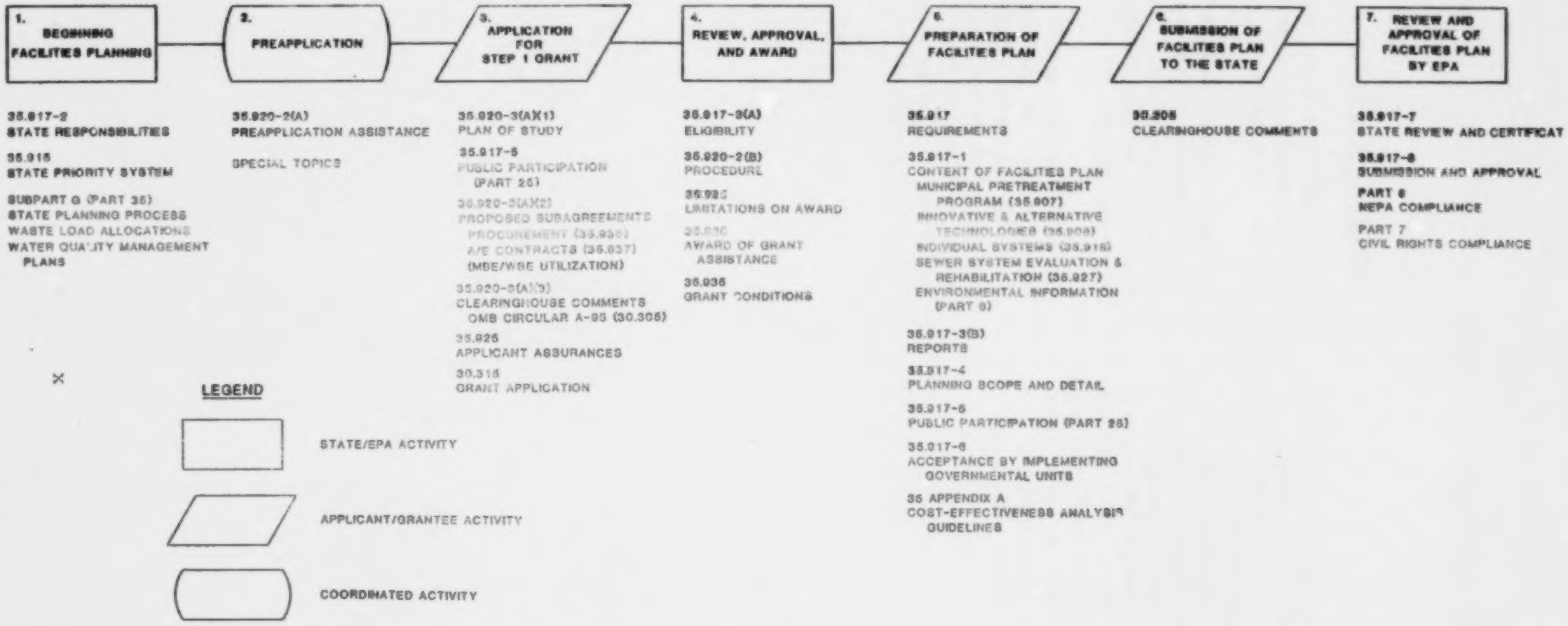
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FIGURE 1. PROCEDURAL FLOW CHART FOR FACILITIES PLANNING (STEP 1 GRANT)

CHAPTER 1

BEGINNING FACILITIES PLANNING

Your State water pollution control agency working with the U.S. Environmental Protection Agency (EPA) did much of the groundwork that resulted in your community's proposed wastewater facilities being selected for planning during the current fiscal year (October 1 - September 30).

The following discussion will briefly acquaint you with the processes that have led to your project getting priority for planning under the construction grants program and the context in which the work will be performed.

1.1
STATE PLANNING PROCESSES

Several sections of the Clean Water Act have been consolidated into an integrated water quality management (WQM) process. Through this process State and area agencies conduct WQM planning to achieve the water quality goals of the Clean Water Act.

Each of these agencies develops a WQM plan that identifies sources and severity of pollution and needed programs to control pollution. Once completed and approved, the plan becomes the foundation for the WQM process.

Using information in the plan and other data, each State annually assesses current water quality problems, updates its strategy to solve problems, prepares and carries out a work program to implement solutions, evaluates performance, and revises the plan. Implementation may involve building wastewater treatment facilities, regulation of point source management of nonpoint sources, legislative initiatives, enforcement, and other activities to meet water quality objectives.

The Clean Water Act requires each State to describe the policies, procedures and practices for fulfilling its WQM responsibilities in a planning document. The document is submitted to the EPA regional administrator for approval and is revised as appropriate through the annual work program. The completed annual work program becomes a part of the State/EPA agreement, a mutually agreed approach for carrying out the Clean Water Act as well as other legislation. Incorporated into the agreement is the State strategy, which is also annually updated under the work program. The State strategy includes:

- Goals for a 5-year period with estimated costs of activities to control priority water quality problems;

- An identification of government entities that will be responsible for conducting the activities;

- Funding sources for the strategy period.

The State planning process also encompasses the State priority system as described in 35.915, which results in the State project priority list for construction grants funding. The State priority system is a method used to rank municipal wastewater treatment projects eligible for grant assistance based on the following criteria:

- Severity of pollution problem;
- Existing population affected;
- Need for preservation of high quality waters;
- Other criteria consistent with regulations.

It is from the State project priority list that projects are selected and certified by the State for Federal funding.

1.2
WASTELOAD ALLOCATIONS

As a part of the WQM process, the State agency establishes total maximum daily wasteloads for all surface waters throughout the State. The agency classifies segments of State waters as either "effluent limited" or "water quality limited."

To make this distinction, the State employs mathematical modeling of a river basin, noting existing point and nonpoint sources of waste as well as basic physical and chemical conditions. Using the assumption that all municipal point sources achieve a minimum of secondary treatment, the model can predict whether water quality standards can be met. If standards can be met, the stream segment is classified as effluent limited and all municipal treatment plants need only achieve secondary treatment.

If the basin model predicts that water quality standards will not be met when all municipal point sources achieve secondary treatment, the segment is classified as water quality limited. Inputs to the model are then varied to establish wasteload allocations for each discharge in the segment. Wasteload allocations help determine the levels of treatment beyond secondary that must be achieved by municipal treatment plants to meet water quality standards.

The wasteload allocations are generally incorporated into the effluent limitations and compliance schedule in the National Pollutant Discharge Elimination System (NPDES) permit. Thus the ability of your community's treatment plant to meet water quality standards and comply with the NPDES permit may serve as a factor in the priority ranking of your project for a construction grant. The wasteload allocation performed by your State is a critical factor in determining the level of your facilities planning effort.

Congress requires special consideration of cases that involve treatment levels greater than secondary, due to the high costs and energy requirements associated with additional processes (section 5.2).

1.3
DELINEATION OF PLANNING AREAS

Delineation of the planning area is initially a responsibility of the State agency (35.917-2(a)). The geographic area should be sufficient to ensure that the most cost-effective means of achieving the established water quality goals can be implemented and that an adequate evaluation of environmental effects can be made. The State also has the responsibility of consulting with local officials in determining boundaries and ensuring that the planning area is large enough to take advantage of economies of scale and efficiencies in planning and management including decentralized or individual systems.

1.4 WATER QUALITY MANAGEMENT (WQM) PLANS

WQM planning is conducted by designated agencies in areas where particularly complex water quality problems exist and by State agencies in areas outside designated areas. The State agency coordinates planning activities by the designated agencies to achieve a State strategy. WQM plans are developed and revised as appropriate to address point and nonpoint pollution problems and solutions that cover the following aspects:

- Municipal and industrial wastewater facilities needs and information to support subsequent facilities planning;
- Total maximum daily loads and wasteload allocations for surface water segments;
- Programs for control of pollutants from dredge and fill material;
- Nonpoint pollutant source control;
- Urban stormwater control;
- Residuals waste control and disposal;
- Review and recommendations for revision of water quality standards to meet water quality goals;
- Water conservation needs and practices.

WQM plans influence the facilities planning process. In particular, all wastewater treatment facilities identified in approved WQM plans are included in the State's needs inventory which contributes to the priority system. The plan also may include recommendations for location, modification, construction, operation and maintenance of municipal facilities, suggested regional or decentralized approaches, and population data for use in planning.

Once relevant portions of a WQM plan have been approved, construction grants may be awarded only to designated management agencies identified in the plan. Facilities planning is based on the wasteload allocations, delineation of planning areas, and population projections and disaggregations in the approved WQM plan. To ensure continuity of facilities planning during the period before final approval of the WQM plan, EPA established the following policies for coordination between the two processes:

- New facilities plans will be started and carried out as provided in the State project priority list.
- The scope and funding of facilities planning will be sufficient to collect all data and conduct all analyses necessary for expeditious completion of the facilities plan.

- The WQM planning agency is expected to review the facilities plan and provide comments.

- After WQM outputs have been developed and approved by the State and EPA for the area, new facilities plans must be consistent with the approved WQM outputs.

The following applies after the WQM plan has been completed and approved and the agency to construct and operate the municipal treatment facilities required by the plan has been identified:

- All facilities plans underway at the time of the WQM plan approval will continue unless the approved WQM plan clearly justifies a change in required treatment levels or alternative approach on the basis of lower costs or major changes in environmental impacts.

- The scope and funding of new facilities plans begun after approval of the WQM plan will be sufficient to supplement the data and analyses in the WQM plan to provide a complete facilities plan (35.917).

1.5 STATE DELEGATION

EPA is in the process of delegating the administration and management of the construction grants program to the States. The amount of delegation varies from State to State; you should always check first, however, with your State water pollution control agency project reviewer as issues arise. Subsequent references in this book to "project reviewer" mean State project reviewer.

CHAPTER 2

PREAPPLICATION

2.1 PREAPPLICATION CONFERENCE

Preapplication assistance, including a preapplication conference, is specifically encouraged in 35.920- 2(a). While called a preapplication conference, in some cases it will come after grant award but before planning has progressed substantially.

Generally, the project reviewer will contact the appropriate official of your municipality when your project has received priority for funding. The reviewer will advise the official on how to complete a grant application and will provide appropriate guidance, including this book.

The project reviewer will schedule a conference at which municipal officials and their consultants will meet with the State and EPA reviewers to discuss various elements of the Step 1 grant and subsequent steps in the construction grants program.

While a conference may not be possible for every project, your municipal officials are entitled to complete assistance and explanations by the project reviewer before or soon after initiation of grant activities.

At the conference, issues relevant to your facilities planning will be reviewed and highlighted. Following are examples of the subjects which might be discussed. Regulations and related sections of this book are referenced in parenthesis:

- Application requirements and procedures including plan of study (30.315, 35.917-3(a), 35.920-2(b), 35.920-3(a), section 3);

- Procurement of professional services, generally architect and engineering contracts (35.936, 35.937, section 3.3.3);

- Public participation requirements for the plan of study and preparation of the facilities plan (35.917-5, 35.920-3(a), Part 25, section 3.2);

- Comments by State, local and Federal agencies using A-95 clearinghouse procedures (30.305, 35.920-3(a)(3), section 3.3.4);

- Award of grant and execution of grant agreement including any special grant conditions (30.345, 35.930, 35.935, section 4);

- Permit limitations to be met by proposed facilities (section 5.2);

- Preparation of facilities plan including scope and detail (35.917-4), general contents (35.917-1), pretreatment program (35.907, Part 403.8), and cost-effectiveness analysis (35 Appendix A, and section 5);

- Scope of environmental information document (EID), evaluation of need for Environmental Impact Statement (EIS), and concurrent development of environmental assessment (EA); i.e., piggybacking (35.917-1(d)(7), 35.925-8(a), Part 6; sections 5.3, 5.3.11);

- Submission, review and approval of facilities plan (sections 6 and 7).

You should not incur costs you intend to finance by Step 1 grant funding until the grant has been awarded to you. EPA does not reimburse you for facilities planning work undertaken before grant award (35.925-18 (a)).

2.2
SPECIAL TOPICS FOR DISCUSSION

In addition to the above items, topics of particular priority or interest to EPA, the State or you should be discussed at the preapplication conference. These might include:

- Use of a simplified (generic) facilities plan for small communities if the screening criteria are met (section 5.6.2);

- Consideration of innovative or alternative treatment technologies particularly appropriate for your project (section 5.6.3.2);

- Use of a mutually agreed upon work schedule in your facilities planning effort (section 6.2);

- Coordination with other Federal agencies that might participate in funding design or construction stages of the project (especially appropriate for rural or small communities) (section 5.6.2);

- Techniques for addressing industrial pretreatment needs (section 5.9.5);

- Status of accelerated facility plans (fast track), use of concurrent and midcourse facility plan reviews (sections 5.7.8, 6.2, 7.1).

CHAPTER 3

APPLICATION

Your municipality is eligible for a Step 1 grant if it meets the eligibility criteria of 35.917-3(a). If two or more political jurisdictions are included in the facilities planning area, the grant applicant may be a joint authority that represents all the jurisdictions, a designated lead agency, or two or more eligible jurisdictions. In these situations, implementation of the completed plan requires inter-jurisdictional resolutions or agreements (35.917-6). The political jurisdictions in the planning area should consult before the application process is begun.

The elements of a Step 1 grant application are listed in 35.920-3(a) and summarized below. For further information see the general grant regulations (30.315) or consult your project reviewer.

3.1

PLAN OF STUDY

The plan of study required by 35.920-3(a)(1) is a major element of the Step 1 application. It ensures that you, the State and EPA have a common understanding of the scope, schedule and costs of the planning to be undertaken. The plan of study should provide the following information (generally in 10 pages or less because the cost of preparation is not allowable for grant funding):

- Maps of the planning area showing boundaries, political jurisdictions, river basins and surface water bodies, and service areas of existing wastewater treatment facilities; NPDES permits; the existing population (most recent U.S. Census); a brief description of existing wastewater facilities; and the communities and major industries served;

- The agencies and jurisdictions involved in the planning. Include any joint resolutions or agreements among jurisdictions that designate a lead agency or official to serve as applicant;

- The nature and scope of planning, including a description of need for the project (such as water quality problems or changes in permit conditions or effluent limitations), and facilities planning tasks and schedule;

- A list of tasks and schedule for a public participation program;

- An itemized description of costs to complete tasks and an estimate of total cost for the Step 1 project;

- A brief summary of significant public comments received on the proposed project. Notice and consultations with the public to discuss the proposed Step 1 grant application and plan of study with local residents is recommended (35.917-5(b)(2)). Since this is not an allowable cost you may use regularly scheduled community meetings.

For complex planning situations, more detailed, accurate cost estimates and planning schedules can be prepared following grant award.

3.2 PUBLIC PARTICIPATION

General regulations for public participation in programs under the Clean Water Act are included in Part 25. The specific regulations relating to public participation as a part of the Step 1 grant are delineated in 35.917-5.

Most projects will need a "basic" public participation program. However, where a project may involve advanced wastewater treatment, or will have significant impacts on matters of public concern, or require preparation of an environmental impact statement, a "full scale" program will be necessary.

Elements of a basic public participation program are specified in Part 25 and in 35.917-5(b). They are:

- Keep the community's residents informed of project development (25.4) throughout the facilities planning process.

- Notify and consult the public during preparation of the plan of study.

- Include in the plan of study a brief outline of the public participation program (elements, tasks, budget and schedule).

- Submit to EPA or delegated State a public participation work plan and project fact sheet within 45 calendar days of grant acceptance or approval to proceed and distribute copies to the interested public (25.11).

- Provide one opportunity for public consultation early in the planning process before selection of alternatives with at least 30 days advance notice (25.4).

- Prepare and distribute responsiveness summaries after each public meeting and address adverse or significant views in the facilities plan (25.8).

- Hold public hearing with 45 days advance notice before adoption of the facilities plan (25.5).

- Include final responsiveness summary in the facilities plan (25.8, 35.917-1(g)).

Besides the basic program, a full scale public participation program (35.917-5(c)) includes:

- A public participation coordinator to be designated or hired and an advisory group (25.7).

- A public meeting for consultation early in the planning process (25.6).

Advice on the performance of public participation program activities will be given at the preapplication conference.

Generally, EPA or the delegated State will decide the level of program appropriate to your project before your submission of the grant application and plan of study. The public participation regulations (Parts 25 and 35) for facilities planning already provide a great deal of flexibility in setting the level of effort for projects that qualify for the basic program.

Small communities can comply with the public participation requirements through rather inexpensive means with regional or delegated

State approval. For example, a one-page plan of study outline, workplan and fact sheet can be presented; existing town council meetings can be used to satisfy requirements for public consultation and public hearings; the notification requirements can be met through the use of existing local information channels; e.g., town bulletin board, notices in the library. Further savings for small communities can be realized by using local officials or volunteers to coordinate public participation efforts and prepare records of meetings.

Public participation might not end with the completion of Step 1 work. Based on the results of the facilities plan and its public participation program, additional public participation activities may be required as elements of subsequent grants (35.920-3(b)(10) and 35.920-3(c)(5)). Public participation requirements also apply to adoption of a user charge system (35.929-2(e)).

3.3
GENERAL APPLICATION REQUIREMENTS

In addition to the plan of study, the Step 1 grant application includes the items described below to complete the application package.

3.3.1
APPLICATION FORM

EPA form 5700-32 is the formal application for a construction grant (30.315). Instructions for completion of each part are included with the form. All information in the application should be consistent with that in the plan of study. The name of the applicant, project, identification number assigned by the State, project description, and the amount of the grant should correspond with the project data on the State priority list. Contact the project reviewer to resolve any discrepancies.

The form is signed by the authorized representative of the agency serving as the "applicant" for the grant. A resolution designating the official who may sign the application accompanies the form. By signing the form, the applicant agrees to comply with various laws, regulations and executive orders listed in Part V of the form. The applicant also agrees to pay the non-Federal costs of the project and assures that the jurisdiction has the legal, managerial and financial capabilities to adequately construct, operate and maintain the resulting facilities (35.925-5).

3.3.2
ALLOWABLE AND UNALLOWABLE COSTS

Allowable and unallowable project costs are described in 35.940. For costs that are not listed (i.e.; miscellaneous costs), determinations are made on a case-by-case basis as to whether costs are allowable using the following criteria (30.705). Allowable costs are:

- Necessary and reasonable and not a normal expense of municipal administration;

- Authorized (or not prohibited) and consistent with Federal, State and local laws or regulations;

- Consistent with policies and regulations applicable to both

Federally assisted and other activities of the unit of government of which the grantee is a part;

- Not included in costs covered by any other Federally financed program.

3.3.3 PROCUREMENT OF SERVICES

Contracts with architectural/engineering firms or other consultants for performance of facilities planning tasks are considered "subagreements" to the grant agreement between the EPA and you. Proposed subagreements or an explanation of intended methods of awarding contracts are included as a part of the Step 1 application (35.920-3 (a)(2)). Detailed procurement regulations are in 35.936, 35.937 and Part 33.

The regulations set minimum requirements for procurement of consultant services and negotiation of contracts. EPA's objective is to ensure that procurement results from open competition and that simple, clearcut contracts are negotiated on the basis of demonstrated competence at a reasonable and fair price. Acceptable types of contracts are identified in 35.937-1, with the most common for Step 1 work being the cost-plus-fixed-fee type.

The amount of the contract determines which sections of the regulations apply. Contracts totaling $10,000 or less can be treated as "small purchases" as stated in 35.936-19. Information on costs is to be prepared in an appropriate format (EPA form 5700-41) for negotiated contracts in excess of $10,000 and submitted when the contract exceeds $100,000 (35.937-6). Contents of each engineering contract in excess of $10,000 are defined in 35.937-9. Appendix C-1 to Part 35 is to be part of any engineering contract greater than $10,000.

Contracts totaling more than $25,000 are subject to the public notification or prequalified list requirements of 35.937-2 unless the population of the municipality getting the grant is 25,000 or less. See 35.937-6(b) for procedures when the contract amount exceeds $100,000.

Consultation with the public in selecting the professional engineer is encouraged (35.917-5(b)(2)).

Other elements that affect the procurement process are EPA's goal-oriented systems for increased participation of minority business enterprises (MBE) (35.936-7 and 35 Appendix C-1.14). Under these systems each regional EPA office has the responsibility of establishing goals. Reasonable costs associated with MBE liaison services, as determined by EPA or the delegated State, are allowable for funding under the grant (35.936-20(c)).

The regulations that govern procurement of consultants and the goal-oriented policies and procedures for MBE use need careful consideration. These matters will be reviewed in detail at the preapplication conference. Contact your project reviewer if you have any questions on the effects of the goal-oriented MBE policies on your proposed subagreements.

Do not incur costs that are to be funded from the grant until the relationship of the various regulations and policies to your project has been resolved and a Step 1 grant awarded.

3.3.4 CLEARINGHOUSE COMMENTS

Office of Management and Budget (OMB) Circular A-95 calls for inclusion of comments from State, local and Federal agencies (by way of State and areawide clearinghouses) as part of the application for a Step 1 grant (35.920-3 (a)(3)). Regulations for clearinghouse review are included in 30.305. Section 30.305-8(b) applies this review to a Step 1 construction grant application.

Before submitting a completed Step 1 application to your State water pollution control agency, provide a copy of the application, plan of study and project notification review system letter of intent to the State and areawide clearinghouses in your project area. This should be done soon enough to permit timely response by the clearinghouses and avoid delays in subsequent application processing. The plan of study and related application materials constitute a notice of intent to apply for Federal assistance.

The clearinghouses have 30 calendar days to review the application materials and return comments to you. Include these comments in the application package you submit to the State. If the clearinghouses cannot complete their review in the time allotted, they must so inform you. In such case, contact your project reviewer for advice. Comments will indicate the degree of interest or concern of other agencies in your project. You should review them to identify sensitive issues for evaluation in the facilities plan. Where an agency or clearinghouse makes adverse comments, include a response to the comments as part of your Step 1 grant application.

Chapter 4

REVIEW, APPROVAL AND AWARD

When you receive the State and areawide clearinghouse comments on the application and plan of study (or if 30 days have passed without response), submit the grant application package to the State. At least one copy of the application form must have an original signature. The State will review the application and plan of study with reference to the project priority list and approved elements of the WQM plan. The project reviewer will notify you of errors or omissions and may request additional information.

Once the State agency has completed its review and confirms that award of grant assistance will not exceed the State's funding allotment, the project reviewer will complete a priority certification (EPA Form 5700-28) for the project. The State will send the approved application and priority certification form signed by the appropriate State official to the EPA regional office. EPA will consider the application complete only when the State priority certification form has been included (35.920-2(b)). The EPA regional office will conduct an independent review or, if responsibilities have been delegated to the State agency (35.912), accept the application on the basis of State certification. Partial submittals may be made and reviewed before completion of all application requirements, but no final action can be taken until the application is complete.

After the State and EPA approve the grant application the EPA regional office will begin processing the notification of grant award and the grant agreement for your project. First, EPA will complete the grant agreement (EPA form 5700-20). Then, EPA headquarters and the appropriate congressional office are notified; next, information on the project is recorded in the EPA data processing and retrieval system; and finally, notification is made to the appropriate State and areawide clearinghouses. Modifications to any of the grant amounts, scope of work, or other aspects may be made as a result of the review process. In addition special conditions based on recommendations from the State agency or comments from clearinghouses may be included in the agreement.

The completed grant agreement will be mailed to you and you will have 3 weeks to accept the grant offer and to return the signed agreement to EPA (30.345-3). The person signing the agreement must be the authorized representative (usually the same person who signed the application form). If there is a new authorized representative, an authorizing resolution must be included with the agreement. Once signed, the agreement forms a legally binding contract between you and the Federal Government. You should review the agreement carefully and, if necessary, discuss any changes from your application with your project reviewer. Also, take note of the special grant conditions that require attention during facilities planning and review the payment schedule included in the agreement. A brief public participation work plan should be submitted to EPA or the State within 45 days of the date of grant acceptance (35.917-5 (b)(4) and 35.917-5(c)(3)(v)).

CHAPTER 5

PREPARATION OF FACILITIES PLAN

5.1 PROJECT NEED AND SERVICE AREAS IDENTIFICATION

The State, often in consultation with your community, designates the facilities planning area for your project as a part of its WQM process (35.917-2(a)). Changes in the geographic scope of the plan can be made only upon approval by the EPA regional administrator after consultation with State and local officials (35.917-4). Once the boundaries of the planning area have been delineated, your first objective is to demonstrate the need for proposed facilities (35.917(b)). In demonstrating need, recognize that the primary purpose of the construction grants program is to assist municipalities in meeting the enforceable requirements of the Clean Water Act (35.901). Emphasis is placed, therefore, upon the abatement of existing water quality problems and compliance with National Pollutant Discharge Elimination System (NPDES) permit requirements.

While many facilities plans will result in complete wastewater treatment systems, facilities plans of lesser scope may also be performed under the construction grants program. Such projects may involve such things as onsite treatment or collector sewers or interceptors from an area located within the delineated service area. If a project includes sewage collection system work, the design and construction may be grant eligible if: (a) it is for replacement or rehabilitation of an existing system (35.927-3); or (b) it is for a new system in a community that meets the requirements of regulations (35.925-13) and EPA policies described in this section.

Because the Clean Water Act was intended primarily to correct existing water quality problems, new sewage collection systems are grant eligible only for communities that were substantially inhabited on October 18, 1972, the date section 211 of the Act was passed. Substantial habitation means that at least two-thirds of the design flow capacity in the proposed sewer system will be for wastewater originating from habitations that existed on October 18, 1972. Exception: certain systems are eligible for residences and small commercial establishments that were inhabited before December 27, 1977. (35.918-1(a)).

New collection sewers must be proven necessary and cost effective within the facilities plan. Funding may be provided only when the existing systems used for wastewater disposal are causing, or have a potential to cause, public health problems, are contaminating groundwater, or are violating point source discharge requirements of the Clean Water Act. If the proposed project will include a new collection system for a portion of the planning area, provide the following information to justify the need for the project.

- Specific documentation of the nature and extent of health, groundwater or discharge problems associated with existing wastewater disposal systems;
- Pertinent information (soil maps, historical data) documenting physical restrictions to the use of onsite systems;
- Documentation of the nature, number, and location of malfunctioning onsite systems. A community survey is recommended and fundable.

Where the need to replace onsite systems has been determined, show that a collection system will be cost effective. The facilities plan should compare the proposed sewer system to nonconventional alternatives such as small-diameter sewers (35.918(a)(5)). EPA's policies on the evaluation of alternatives for unsewered communities are further described in section 5.6.2.

If the proposed project will not include a new collection system, project need should be described in terms of the location, service areas, and problems associated with existing wastewater treatment facilities. You should discuss the need for improving or replacing existing facilities and address such factors as violations of effluent limitations, inability of existing facilities to meet a discharge compliance schedule, or potential public health hazards associated with existing conditions.

5.2
EFFLUENT LIMITATIONS

The facilities plan includes effluent limitations for all discharges (35.917-1(e)) and the numbers of all NPDES permits issued to facilities in the planning area. Effluent limitations will be based on wasteload allocations developed by the State and will indicate the level of treatment required for each facility (35.917(e)). At least secondary treatment (generally 30-day average not to exceed 30 mg/l each of biochemical oxygen demand and suspended solids) is required for all municipal point source discharges to surface waters.

Higher levels of treatment (advanced treatment) may be required to meet State standards for water quality limited segments of receiving waters; however, Congress requires the EPA to review projects involving treatment more stringent than secondary. In such cases, the advanced treatment project can be approved only if the costs attributable to the stricter limitations are supported by a demonstration of significant improvement in receiving water quality and mitigation of existing public health problems. The financial impact of advanced treatment projects on the community is also assessed (see section 5.7.2). If advanced treatment is likely, contact your project reviewer or EPA for assistance. Note that, in response to the Clean Water Act, EPA requires consideration of land application systems and reuse/recycling technologies as a normal part of facilities planning. These systems are especially applicable as alternatives to advanced treatment and discharge.

Construction grant funds may be used to revise wasteload allocations applicable in the facilities planning area. The responsibility for validity of the wasteload allocations will remain with the State. Accountability for the construction grants funds used for the water quality analyses necessary to verify the applicable wasteload allocations will rest with you as the municipality preparing the facilities plan; however, the analyses should be done independently of you or your consultant. If this applies to your project, the EPA and State reviewers will discuss procedures with you.

5.3 ENVIRONMENTAL INFORMATION DOCUMENT (EID)

The facilities plan should provide sufficient information to evaluate the environmental impacts of the alternatives and selected plan (35.917-1(d)(7)). Actions under the construction grants program are subject to EPA regulations (Part 6) and the National Environmental Policy Act (NEPA). EPA cannot award subsequent grants for design and construction of the proposed facilities until either a Finding of No Significant Impact (FNSI) or an Environmental Impact Statement (EIS) has been issued for the facilities plan (35.925-8(a)).

An EID should be an integral part of the facilities plan (6.507 (c)). It should present the environmental analysis conducted throughout the facilities planning process. The information in the EID will be of sufficient scope to enable the State or EPA to prepare an environmental assessment and decide whether a FNSI or EIS should be issued.

The following elements of the facilities plan provide information for compliance with the regulations (6.507):

- Describe the existing environment of the planning area and relate it to the analysis of the alternatives and selection of a proposed plan. The existing environmental conditions to be described in the facilities plan are listed in section 5.4.1 of this publication.

- Describe the future environment without the project, i.e., the "no action" alternative and its effects on future environmental conditions in the planning area, as discussed in section 5.5.4.

- Show the purpose and need for the proposed project, as discussed in section 5.1.

- Sources of information used to describe existing and future conditions should be properly referenced. Consultation with regional, State and Federal agencies responsible for impacts in various areas should be performed early during planning.

- As described further in sections 5.6 and 5.7, develop and evaluate alternatives within the plan. Evaluate impacts on the environment as beneficial or adverse, direct or indirect, and long term or short term.

- Consider the Environmental impacts of the proposed action as described in section 5.8.6, with special attention to unavoidable impacts, tradeoffs, commitments of resources, and measures to mitigate adverse effects.

For further assistance in evaluating environmental impacts during preparation of the facilities plan, consult the EPA publication "Enviromental Assessment of Construction Grants Projects" (FRD-5) and your project reviewer.

EPA's decision either to issue a FNSI or prepare an EIS will be based on an environmental review (required by the Part 6 regulations). Moreover, EPA must comply with procedures of other laws and executive orders. The following special topics require consultation or other procedures during preparation of the facilities plan to avoid delay during review. Adverse impacts in any of these areas may result in the need for an EIS and the imposition of special conditions on subsequent grants.

5.3.1
HISTORICAL AND ARCHEOLOGICAL SITES

Under section 106 of the National Historic Preservation Act and Executive Order 11593, EPA must comply with procedures for consultation and comment by the Advisory Council on Historic Preservation (ACHP) if any of its actions will affect a property listed or eligible for listing on the National Register of Historic Places (6.301(a)).

Consult the State Historic Preservation Officer (SHPO) for information on properties on or eligible for the National Register within the facilities planning area and on the need for any additional work. The project reviewer can advise you of specific procedures for SHPO consultation and review.

In general, planning should be conducted to avoid direct and indirect impact by the proposed facilities on identified properties or potentially sensitive areas. Any unavoidable impact will require evaluation of the identified historic or cultural property, providing information on the property, the potential for effect by the project and mitigating measures. Minimally, adequate data on the property's boundaries, integrity, and significance will be necessary to evaluate the eligibility of the property for listing on the National Register.

Criteria for evaluation and guidelines for level of documentation necessary for requesting a determination of eligibility from the Secretary of Interior are available from the SHPO. Projects affecting properties on or eligible to be on the National Register should be assessed in consultation with the SHPO and in consideration of the ACHP's criteria for effect and adverse effect (36 CFR 800.3).

Cultural resource surveys should be initiated early in the planning process and completed before the Step 3 grant award. The reasonable cost of EPA-required surveys is allowable for grant funding.

5.3.2
FLOODPLAINS AND WETLANDS

EPA's Statement of Procedures for Floodplain Management and Wetlands Protection (Appendix A to Part 6) requires EPA to prepare a floodplains/wetlands assessment for any action under its programs that will adversely affect a floodplain or wetland (6.302(a) and (b)). You should adequately identify floodplains and wetlands in the planning area as they relate to alternatives in the plan.

Floodplains and flood hazard areas are shown on maps prepared by the Federal Emergency Management Agency. Wetlands may be identified by consulting the U.S. Fish and Wildlife Service or the U.S. Army Corps of Engineers.

Alternatives should be developed or modified to avoid direct or indirect impacts on wetlands and floodplains wherever possible.

Wastewater treatment service should not be provided for new development in floodplain areas. Measures to minimize adverse impacts must be evaluated and described when no practicable alternative exists. If the project is located in a wetland or floodplain area or in navigable waters, consult the Corps of Engineers to determine whether a "404/Section 10" permit for discharge of dredge and fill material will be needed. If a permit is necessary the Corps should identify alternate locations, if any, to be evaluated, and which environmental factors should be addressed when the formal permit application is submitted for the selected alternative. (Part 230, 33 CFR Parts 120 and 209).

5.3.2.1
FLOOD INSURANCE REQUIREMENTS

If the selected plan proposes construction in a flood hazard area, all affected communities may have to participate in the National Flood Insurance Program to receive a Step 3 grant (30.405-10). Early coordination among affected communities will help avoid delays in Step 3 grant approval.

5.3.3
AGRICULTURAL LANDS

EPA's policy to protect environmentally significant agricultural lands requires the agency to evaluate the direct and indirect impacts on significant agricultural lands of any actions under its programs. The policy aims to protect significant agricultural lands from irreversible loss as an environmental or essential food production resource (section 6.302(c), 35.925-13 (d) and (e) and Appendix A.8.f(1)). Therefore, the facilities plan should identify significant agricultural lands in the planning area. You may consult the local office of the Soil

Conservation Service of the U.S. Department of Agriculture (USDA). Environmentally significant agricultural lands identified by EPA and USDA include the following categories:

- Prime farmland;
- Unique farmland;
- Additional farmland of State importance;
- Additional farmland of local importance;
- Farmlands of waste utilization importance;
- Farmlands with significant capital investment in erosion and nonpoint pollution control plans.

You should evaluate alternatives that will avoid or minimize adverse impacts on significant agricultural lands (6.302(c)). Measures to mitigate any unavoidable adverse impacts should be described; e.g., as in FRD-5.

5.3.4
COASTAL ZONE MANAGEMENT

The Coastal Zone Management Act requires all Federal activities to be consistent with approved State coastal zone management programs to the extent possible (6.302(d)). If the project is in a coastal area, consult the Office of Coastal Zone Management in the U. S. Department of Commerce and any appropriate State agency. Develop and evaluate alternatives that comply with any approved State coastal management programs applicable to the planning area.

5.3.5
WILD AND SCENIC RIVERS

To comply with the Wild and Scenic Rivers Act, EPA ensures that its actions do not adversely impact any wild, scenic, or recreational river area (6.302(e) and 15 WCPD 1353). During facilities planning you should identify any inventoried or designated rivers in the planning area through consultation with the Heritage Conservation and Recreation Service of the Department of Interior. Project alternatives should then be developed and evaluated to avoid or mitigate adverse impacts on these rivers.

5.3.6
FISH AND WILDLIFE PROTECTION

The Fish and Wildlife Coordination Act requires that all Federal actions be undertaken so as to protect fish and wildlife resources that may be affected (6.302(f)).

During facilities planning consult the U. S. Fish and Wildlife Service and any appropriate State agency to find ways to prevent or lessen adverse impacts your project could have on fish and wildlife.

Sewage treatment facilities can attract birds that pose potential birdstrike hazards to aircraft at nearby airports. If locating a wastewater treatment facility near an airport, you can coordinate the location with regional Federal Aviation Administration (FAA) officials for civilian airports, the regional Fish and Wildlife Service representative, and nearby military air base commanders. "Near airports" means locations within 10,000 feet of any jet runway, within 5,000 feet of any runway used only by piston aircraft and within the approach zones bounded by the conical surfaces as described in FAA regulations.

5.3.7
ENDANGERED SPECIES PROTECTION

EPA and its grantees must comply with the Endangered Species Act (6.302(g)). If a project affects a species of plant or wildlife that the Federal, State, or local government lists as endangered or threatened, EPA must formally consult the U.S. Fish and Wildlife Service, National Marine Fisheries Service, or State agency to identify mitigation measures. Consult these agencies during facilities planning to determine whether the proposed planning area includes the habitats of a listed species. Projects should avoid disrupting such habitats. If a project could cause such disruption, the facilities plan should suggest mitigation measures.

5.3.8
AIR QUALITY

The Clean Air Act requires all Federally funded projects to conform to approved State Air Quality Implementation Plans (SIPs) (6.303). During facilities planning evaluate the direct and indirect impacts of the alternatives on air quality. Consult the State and regional agencies that monitor SIP compliance. Alternatives should be evaluated for compliance and include measures to mitigate adverse affects. As applicable, these actions should comply with the policy and procedures to implement section 316 of the Clean Air Act (45 FR 53382).

5.3.9
WATER QUALITY AND QUANTITY

Wherever effluent from proposed municipal treatment facilities would percolate or discharge into groundwater, the facilities plan includes information and analyses showing the impacts on the groundwater. The plan demonstrates that the effluent, when mixed with groundwater used as a public water supply, will comply with all Federal, State, and local environmental laws and regulations, including the standards established under the Safe Drinking Water Act and the Best Practicable Waste Treatment Technology (41 FR 6190, 35.917-1(d), 35.925-14, 35 Appendix A, and 6.506(a)(6)). The plan for any facility to be built over the recharge zone of any aquifer designated as a sole or principal source (under Section 1424 (e) of the Safe Drinking Water Act) should show that the facility will not contaminate so as to create a public health hazard. For a private, individual system the facilities plan provides a program to test water periodically from existing portable wells in the area. If there are a significant number of onsite systems in the area, checking of aquifers is required (35.918-1(i)).

Identify and evaluate the potential for erosion and sedimentation in the proposed plan.

Special problems include long slopes, steep grades and highly erodible soils. Propose special construction procedures and constraints to deal with these problems. For project sites where dewatering operations are expected during construction, consider minimizing adverse effects from the discharge of silt-laden waters by means of filtration or sedimentation basins or similar construction methods. For projects that involve land treatment or disposal, methods of application should be carefully studied and selected to make sure soil erosion and sediment runoff is minimized. Specify requirements for sediment control practices and maintenance after construction.

Support local and State shoreline stabilization efforts where appropriate.

Consider and discuss with local and State officials saltwater encroachment, depletion of aquifers, land subsidence, and other special problems where they are likely to occur.

5.3.10
DIRECT AND INDIRECT IMPACTS

The facilities plan assesses both direct (primary) and indirect (secondary) environmental impacts of the selected plan and alternatives. Direct impacts relate to the construction, operation, and maintenance of the treatment works and may include such things as:

- Damage to historical, archeological, geological, cultural, or recreational areas during construction;
- Disturbance of sensitive ecosystems such as wetlands and habitats of endangered species during construction;
- Damage and pollution of surface waters due to erosion during construction;
- Displacement of households, businesses, or services.

Indirect impacts include: (1) induced changes in land use, population, and economic growth resulting from the project; (2) other environmental impacts of induced changes. Examples:

- Changes in the rate, density or type of development, including residential, commercial, or industrial, or changes in the use of open space or other land;
- Air, water, noise, solid waste, or pesticide pollution from the induced changes in population and land use;
- Damage to sensitive ecosystems (wetlands, habitats of endangered species) and environmentally protected areas (parks, historic sites) that result from changes in population and land use.

The environmental information document should give special attention to determining whether indirect impacts will violate environmental and land use statutes or regulations.

5.3.11
DECISION TO PREPARE AN EIS

When your project received a Step 1 grant EPA and the State agency reviewed your application and plan of study, WQM plans, and clearinghouse comments, to identify environmentally sensitive conditions in the facilities planning area (6.507).

Based on that review, EPA may have included in the grant agreement special conditions that relate to the scope of environmental information to be provided in your plan. EPA may also have decided to require an EIS. If an EIS is required, EPA will contact you to discuss the possible use of the joint EIS/EID approach (piggybacking). A piggyback EIS saves considerable time because the EIS is prepared concurrently with, rather than subsequent to, the facilities plan.

Through this method the EIS may be prepared by a consultant to the municipality and funded with the Step 1 grant based on a memorandum of understanding between EPA and you. To ensure independent review, the EIS and the facilities plan are prepared by different consultants.

Whether a decision to prepare an EIS is made before, during, or after completion of the facilities plan, it can be made only by EPA based on an environmental review. EPA must prepare an EIS when any of the following conditions exist (6.506):

- The treatment works will induce significant changes in industrial, commercial, agricultural, or residential land use concentrations or distributions. Factors that should be considered in determining if these changes are significant include: (1) vacant land subject to increased development pressure as a result of the treatment works; (2) population increases; (3) faster rate of change in population or changes in population density; (4) potential for overloading sewage treatment works; (5) extent to which landowners may benefit from the areas subject to increased development; (6) nature of land use regulations in the affected area and their potential effects on development; and (7) deleterious changes in the availability or demand for energy.

- The municipal treatment facilities or collector system will have significant adverse effects on wetlands, including indirect effects, or any major part of the treatment works will be located on wetlands.

- The treatment facilities or collector system will significantly affect, directly or indirectly, a habitat identified on the Department of the Interior's or a State's threatened and endangered species lists.

- Construction of the treatment facilities or implementation of the facilities plan may directly cause or induce changes that significantly: (1) displace population; (2) alter the character of an existing residential area; (3) adversely affect a floodplain; or (4) adversely affect significant amounts of prime or unique agricultural land or agricultural operations on this land as defined in EPA's policy to protect environmentally significant agricultural land.

- The treatment works will have significant adverse direct or indirect effects on parklands, other public lands, or areas of recognized scenic, recreational, archeological, or historic value.

- The treatment works may directly or indirectly or through induced development have a significant adverse effect on local ambient air quality, local ambient noise levels, surface or groundwater quality or quantity, or fish and wildlife and their natural habitats.

- The treated effluent is being discharged into a body of water where the present classification is too low to protect present or recent uses and the effluent will not be of sufficient quality or quantity to meet the requirements of these uses.

If EPA determines that an EIS is needed, a full-scale public participation program will be required (35.917-5(c)).

5.4
CURRENT SITUATION

5.4.1
EXISTING ENVIRONMENT OF THE PLANNING AREA

The facilities plan describes existing environmental conditions in the planning area for compliance with 6.507(c)(1). The description should be sufficient to provide a basis for analysis of alternatives and determination of impacts of the proposed action. The description addresses:

- Surface and groundwater hydrology, quantity, quality, and uses;
- Geology and soils;
- Terrestrial and aquatic plant and animal communities;
- Air quality and noise;
- Energy production and consumption;
- Population and socioeconomic conditions;
- Land use and development;
- Public facilities and services;
- Related Federal and State projects in the planning area.

The description should emphasize environmentally sensitive features and areas to be avoided or protected during planning. Consult Federal, State, and regional agencies and the public early in the planning process and follow the specific procedures identified in sections 5.3, 5.5, and 5.7. All sources should be properly referenced.

5.4.2
EXISTING WASTEWATER FLOWS AND TREATMENT SYSTEMS

Provide an inventory of existing wastewater treatment facilities and their interrelationships. This should include onsite systems. The inventory may indicate conditions that limit the number of feasible alternatives and the severity of the pollution problems. Address the existing systems and methods of achieving optimum performance (section 5.6.1):

- Show the location of industrial and municipal treatment plants, sludge management areas and facilities, pretreatment plants, pumping stations, and sewer service areas.
- Describe these facilities, including design capacities, existing flows and characteristics of wastes, NPDES permits, and any overload conditions.
- Show locations of significantly developed areas served by onsite or nonconventional systems.
- Include a discussion and analysis of average, peak, dry, and wet-weather flows.
- Show the locations of bypasses and overflows.
- Describe the extent of any combined sewer system.
- Describe any flow-reduction program in effect.

5.4.3
INFILTRATION AND INFLOW (I/I)

Before EPA can award a Step 2 or Step 3 grant for the proposed project, the facilities plan or supporting documentation (35.917-1(c)) is to show that each sewer system discharging into the treatment works is not, or will not be, subject to excessive infiltration/inflow (35.927(a)). Procedures for documentation are described in 35.927.

An infiltration/inflow (I/I) analysis (35.927-1) is normally required as a part of the facilities plan to identify excessive I/I on a systemwide basis.

Where the analysis shows that excessive I/I may exist, subsequent evaluation (35.927-2) and probably rehabilitation (35.927-3) will be necessary and may be required before approval of the facilities plan and award of a Step 2 grant.

However, if the facilities plan demonstrates that the treatment works will not be significantly changed by subsequent rehabilitation or will be a component part of the rehabilitated system, EPA may approve doing the evaluation and rehabilitation under a Step 2 or Step 3 grant (35.927-5(c)).

5.4.3.1
STATE CERTIFICATION

Using information you provide and other data, the State may certify that excessive I/I does not exist and further documentation is not required in the facilities plan. If the State certifies that excessive I/I does exist, no future grant may be awarded until the regional administrator is satisfied that rehabilitation will not significantly change the treatment works design (35.927-5(a)).

5.4.3.2
I/I ANALYSIS

The following procedures apply to performance of the I/I analysis (35.927-1):

- When flow meters at the treatment plants are determined to be well maintained and accurate, determine the quantity of I/I on the basis of plant flow records compared with the calculated theoretical base flow (based on water flow records when available). A subsystem approach for determining I/I conditions may be advisable in large systems especially where flow records for pump stations are available or where specific problems are known or suspected.

- To determine quickly if infiltration in a study area is excessive refer to Figure 2 on the following page.

- For separate sanitary sewers, determine the possible existence of excessive inflow by performing a cost-effectiveness analysis.

- A maximum of 30% removal of total infiltration (the total as based on the entire system) is generally used as the basis for the cost-effectiveness analysis. A higher infiltration removal rate can be used if it can be technically justified. While these limits do not apply to specific sections of pipe where infiltration is found to be excessive, the overall reduction for the entire system should be consistent with these limits.

- The results obtained from a cost-effectiveness study in the I/I analysis phase are, at best, preliminary and subject to further verification when possibly excessive I/I exists. Therefore, the cost-effectiveness analysis should

Figure 2. Nonexcessive Infiltration Rate

Length of Sewer Pipe	Nonexcessive Infiltration Rate
greater than 100,000 ft.	2000 to 3000 gpd/in/mi
10,000 to 100,000 ft.	3000 to 6000 gpd/in/mi
less than 10,000 ft.	6000 to 10,000 gpd/in/mi

The infiltration rate is based on the highest 7-day to 14-day average infiltration within a 12-month period. The infiltration allowance determined above applies to both I/I analysis and SSES (section 5.4.3.3).

be simple and brief and additional data is not routinely necessary.

o A report summarizing the results of the above analysis is required. The report may be prepared and approved separate from the facilities plan but is incorporated into the facilities plan. The report provides flow data to substantiate the I/I conclusions. When I/I is determined to be possibly excessive, the report contains, in addition to flow data, a detailed study program and estimated costs for performance of a sewer system evaluation survey (SSES) to identify specific problems.

5.4.3.3 SEWER SYSTEM EVALUATION SURVEY (SSES) AND REHABILITATION

You are encouraged to use the exception clause under 35.927-5(c) which allows the SSES to be conducted concurrently with the Step 2 design work.

Do the SSES and rehabilitation in a logical and sequential order. I/I problems should be carefully defined by a systematic flow monitoring program (overall subsystem flow monitoring followed by flow isolation within subsystems) before conducting any other field work. The proposed flow-monitoring program accurately identifies and isolates sewer sections that have excessive I/I. For systems where inflow is a primary problem, limited field work (including physical inspection and smoke testing) may be done to allow timely correction of these inflow problems. Do all field work, including physical inspection and smoke testing, only in areas that have excessive I/I. You may use smoke testing instead of flow monitoring to define inflow problems when it is economical.

Identify I/I problems associated with service laterals; i.e, the sewer connecting the building to the collector sewer, and specifically address them as a separate item in the sewer system evaluation and the proposed rehabilitation program.

Preferably, determine service lateral I/I problems through visual inspection of a representative sample of joints where service laterals are connected to collector sewers. For example, television (TV) inspection of collector sewers during flow isolation may be used for estimating I/I at Y - fittings from service laterals while at the same time inspecting the internal conditions of the collector sewers. Quantifying sources of I/I other than service laterals by means of TV is generally unacceptable. Flow isolation followed by concurrent pressure testing and sealing procedures is the preferred method and should be used where leaks are to be grouted and concurrent test and seal can be used.

After completing the flow monitoring, physical inspection, and smoke testing activities, prepare an interim SSES report. The report contains: (1) supporting data; (2) a proposed rehabilitation program; (3) a detailed cost estimate for the proposed rehabilitation program; and (4) specifications for the proposed rehabilitation program. For larger sewer systems where the I/I problem is generally more complex, this report can be submitted before completion of the bidding documents to avoid project delays. In these cases, prepare bid documents while the State and EPA are reviewing the report.

When concurrent sewer testing and sealing techniques are used, ensure that the bid package covers sewer line cleaning, pressure testing, and grouting. When applicable, the contract documents should also include other sewer structural repairs such as manholes and covers. Require bidding in unit prices; e.g., price per foot of sewer cleaned, price per joint of sewer pressure tested or chemically grouted.

Do rehabilitation work through competitive bidding if the cost of the rehabilitation work in the contract exceeds $10,000 (35.936-14). The work must comply with the procurement requirements of 35.938 and 35 Appendixes C-1 and C-2. For projects where large scale pressure test and seal work is proposed, the recommended approach is rehabilitating first a selected sample of sewers or a small subsystem. Analyze the results of the pilot rehabilitation to be sure the benefits are attained before conducting a full-scale rehabilitation.

To ensure the concurrent pressure testing and sealing techniques are effectively applied, isolate sections of the sewer subject to excessive infiltration within each subsystem. Limit sewer grouting to structurally sound sections of the sewer that have service line connections in good condition. Before the actual testing and sealing process, make a brief internal inspection by pulling the TV camera quickly through the sewer line. When rehabilitation methods other than grouting are required; i.e., limited structural repair, record these needs and identify the sewer section. The testing and sealing process is usually not performed in sections that need structural repairs because the structural work is done in Step 3 and the cost of mobilizing equipment, etc., is not justified.

You may perform limited structural repairs and sewer replacement under any Step grant when approved by the State and EPA (35.927-3(a)&(c)) provided the work is not a part of the municipality's normal operation and maintenance responsibilities. Where structural repairs are required for a substantial portion of the sewer system, especially in cases where public hearings are warranted, make repairs later and perhaps as part of Step 2 and Step 3.

Test the performance of the completed rehabilitation of each subsystem when the groundwater level is high, using single point flow monitoring. Analyze the results and compare them with the system flow meter records to assess the effect of groundwater migration. Report the results immediately to the project reviewer when you find that the rehabilitation program for a particular subsystem is not producing the projected result. When the rehabilitation for the entire system is completed, send the State and EPA a report summarizing the results of postrehabilitation flow monitoring and analysis for each subsystem.

Your engineer should inspect rehabilitation work. He should have experience in sewer rehabilitation.

5.4.3.4
SEWER MAINTENANCE PROGRAM AND SEWER USE ORDINANCE

The SSES report addresses and, whenever possible, incorporates an enforceable sewer use ordinance. The ordinance contains a realistic program to remove existing excessive I/I sources and illegal connections and to prohibit future illegal connections. The ordinance also specifies an acceptable infiltration rate for new sewers that discharge into the proposed treatment works and describes how new connections should be designed.

The SSES report contains a commitment to a comprehensive and effective sewer maintenance program. The proposed maintenance program is prepared subsequent to Step 1 and includes:

- Organizational and functional structure of the proposed maintenance department (inhouse and/or contract service);
- Equipment and vehicles to perform the maintenance;
- Staffing;
- Anticipated activity including preventive and corrective programs;
- Recordkeeping;
- Annual budget;
- Schedule of implementation.

5.4.4
PERFORMANCE OF EXISTING SYSTEMS

Evaluate the performance of existing wastewater treatment facilities, including onsite disposal systems, to determine their operational efficiency. Compare existing performance with optimum performance in terms of effluent quality and treatment capacity. For decentralized systems describe the extent, nature, and location of malfunctions (refer to section 5.1).

When you evaluate the performance of existing systems, consider:

- Adequacy of the treatment plant design for the character and amount of waste treated (compare with NPDES permit);
- Adequacy of operation and maintenance program; including process control methods, maintenance management systems, staffing, salaries, and replacement funds and schedules;

- Effects of infiltration/inflow;

- Effects of industrial discharges;

- Degree of documentation of problems associated with onsite systems.

5.5 FUTURE SITUATION

The planning period (35 Appendix A.4.c) is the timespan over which wastewater management needs are forecast, facilities planned, and costs amortized. The facilities planning period is 20 years beyond the date the facilities are scheduled to begin operation (35 Appendix A.6.b).

The most cost-effective plan may provide for staging construction of operable parts of the facilities to meet changing conditions during the planning period. Consider building a plant with capacity to handle wastewater flows projected for only part of the 20-year planning period. The plan could provide more capacity later to treat the increase in wastewater flows projected for the rest of the planning period.

Procedures for staging proposed treatment plants and interceptors are given in 35 Appendix A.8.e and A.8.f.

5.5.1 DEMOGRAPHIC, ECONOMIC, AND LAND USE PROJECTIONS

Wastewater treatment needs and design capacities for the facilities planning area will be determined by future population, land use patterns, and economic growth. Regulations governing the use of population estimates for facilities planning are included in 35 Appendix A.8.a. The estimates of design year population in the planning area are based on disaggregations of State population projections. The baseline State population projections were prepared in 1977 by the Bureau of Economic Analysis of the Department of Commerce. Deviations should be justified by supporting documentation.

The facilities plan should be carefully coordinated with land use plans. Projected land use patterns and densities are one basis for determining the optimum capacity and location of facilities. Where land use plans have not been prepared for all or part of the planning area, you can estimate future land use patterns and densities in consultation with existing planning agencies and zoning commissions.

Lands where development should be avoided, such as highway rights-of-way, powerline easements, and environmentally sensitive areas (including significant agricultural lands, parks and historic sites), are not to be included when estimating future development patterns and densities.

5.5.2 FORECASTS OF FLOWS AND WASTELOADS

The facilities plan should relate the size and capacity of facilities to the needs in the planning area (35.917-1(d)(1)). Wastewater flow estimates are calculated from estimated future population, nonexcessive infiltration/inflow, and industrial flows projected according to procedures in 35 Appendix A.8.b and Appendix A.8.d. Regulations in 35 Appendix A.8.d identify allowances for future flows from industries and required documentation. During planning contact industries served by the municipal facilities to determine needs for future capacity. When estimating future flows and wasteloads consider:

- Use of approvable population estimates (35 Appendix A.8.a);

- Use of approvable average daily base flow (35 Appendix A.8.b);

- Use of approvable allowances for future industrial flows with documentation by letters of intent from industries (35 Appendix A.8.d(2)). Note: If you have any industrial sources whose flow exceeds 50,000 gallons per day contact your project reviewer to determine the impact of the industrial cost exclusion contained in the recently enacted 1980 Clean Water Act amendments;

- Analyses of pollutant content of existing flows;

- Estimates of nonexcessive infiltration/inflow;

5.5.3
FLOW AND WASTE REDUCTION

The facilities plan includes evaluation of alternative flow and waste reduction measures, including nonstructural methods (35.917-1(d)(2) and 6.507(c)(5)). Unless the existing average daily base flow is 70 gallons per capita per day (gpcd) or less or the current population is under 10,000 (35 Appendix A.8.C), consider:

- A public information program to encourage wastewater reduction;

- Changes in water pricing policies to promote conservation;

- Installation of water meters and retrofit with water-saving devices of existing homes and other buildings;

- Changes in local ordinances or codes that require installation of water-saving devices in new homes and other buildings.

5.5.4
FUTURE ENVIRONMENT WITHOUT THE PROJECT

A "no action" option is to be evaluated as an alternative to any proposed project (6.507(c)(2)). The plan should discuss the future environmental conditions without the project and cover the same subjects described in section 5.4.1.

5.6
DEVELOPMENT OF ALTERNATIVES

The prime objective of facilities planning is to develop and evaluate alternatives (not to be confused with "alternative technology", 5.6.3.2) and then select the most cost effective system for wastewater management in the planning area. Note, however, that cost effectiveness is not strictly a monetary term, and the most cost-effective alternative need not necessarily be the lowest cost alternative. Rather, cost effectiveness includes consideration of a variety of quantitative and qualitative factors (economic, environmental, social, institutional), and selection of the action that meets water quality objectives, without overriding adverse impacts, at the lowest present-worth cost (35.917(b)).

Identify the feasible alternative waste management systems in the plan (35.917(b), 35 Appendix A.5.a). These alternatives are then screened to determine those that can meet the Federal, State and local criteria (35 Appendix A.5.b). Evaluation of these principal alternatives is performed later (section 5.7). Discuss possible use of simplified (generic) plans with your project reviewer.

5.6.1
OPTIMUM OPERATION OF EXISTING FACILITIES

The facilities plan includes an evaluation of improved effluent quality attainable by improved operation and maintenance of existing facilities (35.917-1(d) and (e) and 6.507(c)(5)).

An investigation of existing facilities, including onsite disposal systems, may reveal that they can function more efficiently with the addition of new equipment, operational changes, or the addition and training of operating personnel. Conversely it may be found that the facilities are already operating at peak efficiency but other factors are limiting their ability to meet applicable standards.

Whatever the results of the investigation, the optimum operation of existing facilities will determine if additions, expansions, or replacements must be made, including better design, operation, and maintenance of onsite systems, and the extent to which existing facilities can be converted or used in lieu of a new system. Consider any improvements expected as a result of future pretreatment by industrial contributors, removal of excessive infiltration/inflow, or staging of new capacity.

5.6.2
REGIONALIZATION, INDIVIDUAL SYSTEMS AND SMALL ALTERNATIVE SYSTEMS

In delineating the facilities planning area, the State agency was responsible for including an area sufficiently large to allow for efficiencies through interconnection of waste treatment systems or collective management of such systems (35.917-2(a)(1)). Also, where individual systems are likely to be cost effective, the area should have been delineated with sufficient size to allow for economies of scale in planning and managing these systems (35.917-2(a)(4) and (35.918)).

If the facilities planning area includes several communities, each served by separate facilities or systems for wastewater disposal, a regional planning approach may be advisable. Such an approach may have been evaluated or recommended in an approved WQM plan for the area.

Regional alternatives for a large planning area may involve various arrangements for construction, operation, maintenance, and management. For example, several jurisdictions may form a regional authority to construct, operate, and maintain a centralized treatment system for the entire planning area. As another approach, one jurisdiction may serve as a lead agency for construction, operation, and maintenance of facilities that serve all the jurisdictions.

Regionalization need not involve construction of physically connected facilities. Rather, individual jurisdictions may be responsible for construction of municipal facilities while a regional authority may be formed to consolidate one or more operation and management functions.

Regional facilities have various advantages and disadvantages. Advantages include: savings in personnel, materials and supplies, more treatment capability per dollar, higher operator skill levels, better performance of treatment, and fewer effluent discharge points. Fewer discharge points could reduce direct environmental impacts. Disadvantages include: higher costs due to heavy reliance on technology, longer design and construction time, potential for induced growth and resultant adverse environmental impacts, depletion of streamflow, and need for interjurisdictional cooperation and joint agreements.

The planning area often includes several jurisdictions or communities. One or more of those may be served by individual onsite systems such as septic tanks or holding tanks.

Alternatives for onsite or small-flow wastewater disposal systems should be considered in facilities planning, especially for areas not now served by central systems or where alternatives are likely to be more cost effective than collector and interceptor networks (35.917-1).

Twenty-one alternative systems are briefly described in an EPA publication (FRD-10) available from your project reviewer. Engineers can get detailed technical descriptions of many of these systems in EPA'S manual for onsite systems available through the EPA. These systems include:

- Subsurface disposal or mound systems;
- Dual systems (blackwater/graywater);
- Cluster systems that serve several users;
- Small-diameter gravity sewers (6-inches or less);
- Pressure or vacuum sewers.

As a financial incentive to small or rural communities, Federal funding of privately owned alternative wastewater treatment facilities is permitted where they are shown to be cost effective (35.918). A program for inspection and maintenance to be included in the facilities plan should provide for:

- Periodic physical inspection of all onsite systems in the planning area;
- Pumpouts, renovation and replacement as needed;
- Testing of existing, local potable water wells once a year;
- Additional monitoring of water supply aquifers, if appropriate, where substantial numbers of onsite systems exist.

Publicly owned systems may qualify for and use the 15% cost preference to determine the most cost-effective alternative for alternative and innovative processes; privately owned systems may not (35 Appendix A.7). Both types of systems, however, are eligible for 85% EPA grants rather than conventional 75% funding if they qualify as innovative and alternative technology (35 Appendix E).

To provide additional assistance for small and rural communities, EPA has executed an interagency agreement for rural water and sewer projects with the Farmers Home Administration (FmHA), Economic Development Administration (EDA), Housing and Urban Development (HUD), and Community Services Administration (CSA). These agencies will coordinate efforts to improve delivery of Federal assistance to small, rural, and semirural communities in the form of grants, loans, and technical assistance.

As discussed in section 5.1, conventional sewage collection systems for existing unsewered communities may be eligible for grant funding if the communities existed on October 12, 1972, and the system will not encourage development in environmentally sensitive areas (35.925-13). Include documentation of need in the facilities plan (section 5.1). The conventional system should be cost effective.

Where the population density within the proposed collection system area is less than 1.5 persons per acre (one household per 2 acres), collector sewers will be considered non-cost-effective unless a severe pollution or public health problem is documented and collector sewers are shown to be clearly more cost effective than any of the alternatives for sparsely populated areas.

In addition, the facilities plan should show, where population density is less than 6 persons per acre (2 households per acre), that alternatives are less cost effective than new gravity collector sewer construction and centralized treatment.

The facilities plan should examine alternatives such as limited sewer service for a portion of a community where applicable. For example, septic systems work very well in many small towns except in one isolated area, such as a business district, where open space for adequate individual onsite disposal is not available. Consider a community drainfield or other alternative solution as well as limited central collection and treatment solutions. Consult your EPA or State reviewer about "Generic Facilities Plans for a Small Community" (FRD-18, February 1981).

When considering regional alternatives involving construction of new interceptors to connect communities in the planning area or when considering new collection systems, evaluate the environmental factors discussed in section 5.3. Additional guidance for alternative interceptor systems is provided in section 5.6.3.3.

The need for a service agreement to be completed before award of a Step 2 grant for projects involving more than one political jurisdiction will be determined by the regional administrator (35.920-3(b)(6), 35.917-6). Such agreements cover the specific items defined in 35.920-3(b)(8); e.g., financial arrangements, enforcement, user charge requirements, sewer system rehabilitation, sewer use ordinances. Since the agreements often entail long periods of negotiation, it is to your advantage to begin action on them as early as possible during the development of the facilities plan.

5.6.3 EVALUATION OF SYSTEMS

When developing alternative wastewater systems, the facilities plan should relate the size and capacity of the facilities to the needs, including reserve capacity (35.917-1(d)(1)), based on existing and future conditions (sections 5.4 and 5.5).

The "no action" alternative should be discussed (6.507)(c)(2)). This option will frequently be appropriate for a portion of the planning area. The no action alternate describes the future environment without the project (section 5.5.4).

Consider each treatment alternative's flexibility to operate in various treatment modes and under different hydraulic and loading conditions.

5.6.3.1 BEST PRACTICABLE WASTE TREATMENT TECHNOLOGY (BPWTT)

BPWTT can be defined as a minimum of secondary treatment for discharge to surface waters or treatment that will meet the primary drinking water standards after land application (5.7.4, 5.6.3.5). To meet the BPWTT requirement, facilities plans are to evaluate, at a minimum, alternatives under the following five waste treatment management techniques (35.917-1(d)(5)):

- Biological or physical-chemical treatment and discharge to receiving waters;
- Treatment and reuse;
- Land application;
- Systems that generate revenue;
- Onsite and nonconventional systems.

In evaluating options for treatment and discharge, consider the later application of technology providing for: (1) the reclaiming of waste, (2) recycling of water, (3) eliminating the discharge of pollutants by containment to the extent practicable.

The Clean Water Act encourages the use of land treatment of municipal waste where practicable. Design manuals for the other listed treatment technologies are referenced in Appendix C of this book.

Land treatment, water reuse and nonconventional systems qualify as alternative (as in I&A) technology and may receive a higher level of Federal funding. Section 5.6.3.2 provides additional information on I&A technologies.

The technical design basis for land treatment alternatives (slow rate, overland flow, and rapid infiltration), is the EPA "Design Manual on Land Treatment" (EPA 625/1-77-008) and "Costs of Wastewater Treatment by Land Application" (EPA 430/9-75-003, revised 9/79).

The design manual recommends a two-phase approach to the evaluation of land treatment alternatives. The first phase should include enough detail to establish whether sites are available, soils suitable, and the cost of land treatment competitive. If these conditions are met, phase two would include an indepth investigation of sites and refinement of design factors to complete the requirements of a facilities plan. An acceptable analysis of land treatment includes:

- Site selection--A map of the planning area showing the tracts of land evaluated as potential land treatment sites. The plan should describe the reasons for rejecting sites as well as the availability of suitable sites. Categorical elimination of land treatment for lack of suitable sites is to be documented with supporting information (soils data, etc.).

- Loading rates and land area--Values used for these parameters that agree with established ranges in the EPA design manual. Values outside the established ranges are to be explained with a discussion of extenuating circumstances.

- Estimated Costs--Compare approximate costs for land treatment with those in the EPA guidance on costs, as updated, using local construction cost indexes. Elimination of land treatment due to land costs or transport costs should be documented by an evaluation of actual costs.

- Preapplication treatment--The level of treatment before land application should agree with guidance in the EPA design manual for the type of application process used. EPA will not accept a universal minimum of secondary treatment before land application without supporting environmental documentation. Treatment more stringent than recommended in the design manual should be justified. If documentation is not acceptable, EPA may consider the costs of the additional processes beyond those recommended in the design manual as unallowable for grant funding.

- Environmental effects--The environmental evaluation of a land treatment system should emphasize quality and quantity of surface water and groundwater resources, energy conservation, pollutant recycling, and compatibility of land use. BPWTT criteria are to be met for protection of groundwater based on current quality and uses of the water.

5.6.3.2
INNOVATIVE AND ALTERNATIVE (I&A) TECHNOLOGY

The Clean Water Act clearly established the intent of Congress to encourage the use of innovative and alternative technologies in the construction grants program.

The underlying concept of the regulations for I&A technology (35.908) is the provision of a basic monetary incentive through a grant increase from 75 percent to 85 percent for design and construction of municipal treatment facilities that represent advancement of current state-of-the-art (for innovative technology) to meet national goals for resource recovery, energy conservation, cost reduction, and improved environmental management. All facilities plans are to include evaluation of I&A technology (35.917-1(d)(8)).

"Alternative technologies" are fully proven methods that reclaim and reuse water, productively recycle wastewater constituents, eliminate the discharge of pollutants, or recover energy.

"Innovative technologies" are methods that have not been fully proven in the circumstances of their contemplated use. They may be alternative technologies or conventional treatment methods which have an acceptable level of risk and corresponding opportunity for significant advancement in the state-of-the-art.

Specific guidelines and examples of areas of alternative technologies are included in 35 Appendixes A & E. EPA has issued a publication entitled, "Innovative and Alternative Technology Assessment Manual" (MCD-53), which should be consulted for detailed information.

Wastewater treatment systems to solve the water pollution problem are initially classified either as alternative technology or conventional methods. For those which are not fully proven, potential for advancement in the state-of-the-art is to be evaluated. Systems that involve some reasonble risk; i.e., advancement over proven conventional practices, are then evaluated against six criteria (defined in 35 Appendix E) to determine whether they qualify as innovative. Alternative technology qualifies as innovative if it meets any one of the six criteria.

The regional administrator may consider local conditions in determining a technology innovative (35 Appendix E.6). Conventional methods, however, may be classified as innovative only if they meet either the 15 percent life-cycle cost reduction or the 20 percent net primary energy reduction criteria.

The remaining feasible alternatives, called principal alternatives, which will be subjected to cost-effectiveness analysis, are analyzed to identify the noninnovative system and the least energy consuming noninnovative system. The I&A technology projects are then compared with these noninnovative systems. A 115 percent cost preference is applied; i.e., the I&A project may cost 15 percent more in present worth than the lowest-cost noninnovative alternative and still be considered equal. Further explanations and examples are provided in section 5.7.1 and MCD-53, Figure 2-2 .

If the I&A project is cost effective and environmentally sound, implementable, and acceptable to the public, subsequent Federal grants may be increased to 85 percent for the I&A portions of the project and for costs associated with preparation of the facilities plan. Furthermore, grants are provided for up to 100 percent of the correction or replacement cost if the I&A project elements fail to operate as required within 2 years of the date of final inspection, except where failure is caused by gross negligence.

5.6.3.3 EVALUATION OF SEWER ALIGNMENTS

Since the location and length of interceptors will generally influence growth in the planning area, plan carefully the interceptor routes and staging of construction.

In general, interceptors may be funded where they eliminate existing point source discharges and accommodate flows from existing communities that violate enforceable requirements of the Clean Water Act.

The following restrictions apply (35 Appendix A.8.f):

- Do not extend interceptors into environmentally sensitive areas unless they eliminate existing discharges or serve existing communities that violate an enforceable requirement of the Clean Water Act.

- Evaluate direct and indirect impacts (section 5.3.10) of interceptors on environmentally sensitive areas such as: floodplains, wetlands, and significant agricultural lands.

- Where there is no practicable alternative that avoids impacts on environmentally sensitive areas, identify measures to minimize adverse impacts.

- EPA may impose grant conditions on subsequent grants, including restrictions on sewer hookups, to protect environmentally sensitive areas (section 5.3.2).

The facilities plan should assess the need for interceptors, areas to be served, and the existence of environmentally sensitive areas. Consider alternative routes for interceptors in light of the above factors (6.507(c)(5) and section 5.3).

5.6.3.4
ULTIMATE DISPOSAL OF RESIDUALS

The required analysis of alternative methods of ultimate disposal of residuals should include an assessment of potential impacts on ground-water quality (35.917-1(d)(6),(7) and 6.507(c)(5)). In addition to conventional methods such as landfill or incineration, consider innovative and alternative technologies (section 5.6.3.2) and their associated economic, environmental, social and institutional factors (section 5.7). For further information refer to "A Guide to Regulations and Guidance for the Utilization and Disposal of Municipal Sludge (MCD-72).

5.6.3.5
COMBINED SEWER OVERFLOWS (CSOs)

The costs and benefits from control of combined sewer overflows (CSOs) vary with numerous environmental and system-related factors. Decisions relating to CSOs are made on a case-by-case basis.

Control of pollution from CSOs should be considered if application of BPWTT for dry-weather flows would not meet water quality standards (35.917-1(d)(4)). Treatment or control of CSOs may be given priority for construction grants funds only after secondary treatment of all dryweather flows in the area is assured. (Execption: where EPA has received an application for a marine discharge waiver under section 301(h) of the Clean Water Act).

Where measures may be proposed for the control of CSOs, the facilities plan is to evaluate the following for the 20-year planning period:

- Alternative control techniques and management practices that could attain various levels of pollution control;

- Cost of achieving various levels of pollution control by each of the control techniques that appear to be most feasible and cost effective;

- Benefits to receiving waters of a range of pollution control alternatives during wet-weather conditions. Consult WQM plan as appropriate;

- Costs and benefits from addition of advanced wastewater treatment (AWT) processes for dry-weather flows in the area as an alternative to CSO control.

A final alternative selected for control of CSOs is to meet the following criteria:

- The analysis demonstrates that the proposed level of pollution control is necessary to protect an attainable beneficial use of the receiving waters even after the standards required by the Clean Water Act for industrial discharges are met and a minimum of secondary treatment is achieved for all dry-weather municipal discharges in the area.
- Provision has been made for funding of secondary treatment of all dry-weather flows in the area or an application for a marine discharge waiver has been received by EPA.
- The technique proposed for CSO control is more cost effective for protecting beneficial uses than other CSO control techniques plus higher levels of treatment for dry-weather municipal flows in the area.
- The marginal costs of control are not substantial compared to marginal benefits.

If portions of the planning area are served by combined sewers and an evaluation of CSO abatement is to be included in the facilities plan, request additional guidance from the project reviewer. To determine what portion of CSO control costs for a multiple purpose project are grant eligible, refer to the multipurpose discussion in section 5.6.3.8.

The Clean Water Act prohibits funding of costs for control of pollutant discharges from a separate storm sewer system (35.925-21).

5.6.3.6
MUNICIPAL INDUSTRIAL TREATMENT

Consider the issues mentioned below when planning municipal treatment facilities that will accommodate industrial flows. The treatment works design capacity may include allowances for industrial flows (35 Appendix A.8.d and section 5.5.2). However, the following costs are not allowable for grant funding (35.925-15):

- Costs of interceptor or collector sewers constructed exclusively or almost exclusively to serve industrial users;
- Costs allocable to the treatment for control or removal of pollutants introduced solely by industrial processes.

The 1980 amendments to the Clean Water Act, (PL 96-483) provided that:

- Construction costs to collect or treat industrial flows in excess of 50,000 gallons per day are not grant eligible after November 15, 1981, unless the project was approved to prepare construction plans and specifications before May 15, 1980.
- Requirements for industrial cost recovery (ICR) are repealed as of December 27, 1977. Any ICR provisions in a grant made since

March 1, 1973, are to be removed; 35.928 is no longer in force for those projects.

Where industries will be served by the planned facilities, a pretreatment program may be required (35.907 and 403.8). A pretreatment program is required (35.907(b)) when:

- The municipal treatment works serves or is expected to serve industries subject to pretreatment standards under the Clean Water Act (307);
- The WQM plan has not provided for development of an approvable pretreatment program.

Section 5.9.6 identifies specific elements to be included in a pretreatment program.

5.6.3.7
PHASED CONSTRUCTION

Adding capacity in phases during the 20-year planning period may be more cost effective than providing full capacity in initial construction. The plant will be more efficient, effective and economical than if it runs substantially under capacity. Information on staging of treatment plant construction is provided in 35 Appendix A.8.e. Staging of interceptors is discussed in 35 Appendix A.8.f. Factors to be considered are:

- Relative cost of providing full capacity initially compared with the present worth of deferred costs for providing capacity when needed;
- Uncertainties of projecting long-term wastewater flows and possible technological advances or flow- and waste-reduction measures which may limit need for full capacity.

Modular development of operable components of a treatment plant is advisable in areas where high growth rates are projected, where treatment must become more stringent later in the planning period, or where existing facilities are to be used initially but phased out later.

5.6.3.8
MULTIPLE PURPOSE PROJECTS

A multiple purpose project is one that is designed to meet enforceable requirements of the Clean Water Act; i.e., NPDES permit or BPWTT, but that also has components not associated with enforceable requirements of the Act.

Projects designed only to meet an enforceable requirement are single purpose. Thus, a project that includes land application as an integral part of a wastewater treatment system to meet effluent limitations is single purpose.

An agricultural reuse project that uses effluent which could be discharged to a stream; i.e., discharge meets NPDES limitations, is multiple purpose.

To reduce costs and conserve energy, the facilities plan may contain a broad examination of structural and nonstructural alternatives that include multiple purpose options.

Reasonable costs necessary for screening and evaluating multiple purpose options are allowable for Step 1 grant funding.

5.7 EVALUATION OF ALTERNATIVES

After developing alternatives as described in section 5.6, systematically screen them to determine those that can meet Federal, State and local criteria (35 Appendix A.5.b). Then analyze the resulting principal alternatives to identify those which have cost-effective potential (35 Appendix A.5.c).

CAPDET, a computer assisted procedure for the design and evaluation of wastewater treatment systems, can be used quickly to screen costs of a large number of alternatives. The fact sheets in Appendix A of the I/A Manual (MCD-53) and the financial impact on a community on a per household basis can also be used.

The principal alternatives, which you will select through this screening process, should undergo a thorough cost-effectiveness analysis. This is described and outlined in 35 Appendix A.6 and (6.507(c)(5), (6) and (7)). Discuss the reasons for the selection of a prefered alternative and the reasons for the elimination of other alternatives.

5.7.1 EVALUATION OF MONETARY COSTS

Procedures for performing the cost-effectiveness analysis are given in 35 Appendix A.6.

There is also a cost preference for project's involving I&A technologies (35 Appendix A.7). This section gives additional guidance and examples. Section 5.7.1.4 summarizes the procedures for application of the cost preference in the analysis. Once the present worth or equivalent uniform annual cost are determined for each principal alternative, the least costly alternative can be identified.

5.7.1.1 SUNK COSTS

Any investments or commitments made before or during facilities planning are regarded as sunk costs and not included as monetary costs in the plan because they are identical for all alternatives, and the sunk costs have already been committed regardless of the alternative selected. Such investments and commitments include:

- Investments in existing wastewater treatment facilities and associated lands even though incorporated in the plan;
- Outstanding bond indebtedness;
- Cost of preparing the facilities plan.

5.7.1.2 PRESENT WORTH AND EQUIVALENT UNIFORM ANNUAL COSTS

"Present worth" may be thought of as the sum which, if invested now at a given rate, would provide exactly the funds required to make all future payments. "Equivalent uniform annual cost" is the expression of a nonuniform series of expenditures as a uniform annual amount. Either of these methods may be used (35 Appendix A.6.a).

Detailed procedures for making these calculations are explained in most engineering economics textbooks.

Three examples are shown on the following pages and include: (1) a simple project assuming constant

O&M costs; (2) a project with varying O&M costs; and (3) a complex project assuming varying O&M, phased construction, and a positive salvage value. To follow the example analyses, you may refer to the tables in Appendix D of the I&A Assessment Manual for 7 3/8% compound interest, the rate for fiscal year 1981; i.e., October 1, 1980, to September 30, 1981. These tables may also be found in engineering economics textbooks.

The discount rate used for facilities planning is published annually by the United States Water Resources Council in the Federal Register.

5.7.1.3
COST ESCALATION FACTORS FOR ENERGY USE

Energy cost escalation factors, for use at the grantee's option, were published in the Federal Register October 3, 1980, page 72984. If necessary, check with your project reviewer to find out if final energy factors have been published.

5.7.1.4
I&A COST PREFERENCE

If a proposed system is to qualify as innovative based on criteria other than 15% life-cycle cost savings, or if it is to qualify as alternative technology, use the following procedure (35 Appendix A.7):

a. Calculate the present worth of the innovative or alternative components of the proposed system.

b. Using the total present worth of the innovative or alternative system, calculate the percentage that the proposed innovative or alternative components represent.

c. If the present worth of the proposed innovative or alternative is less than 50% of the total present worth of the innovative or alternative system:

(1) Calculate the present worth cost of the least costly noninnovative system components being replaced;

(2) Multiply the present worth cost of (1) by 1.15;

(3) Add the result of (2) to the present worth of the remaining components of the least costly noninnovative system.

Result: The total present worth of the proposed innovative or alternative system should be less than the result of (3) to be considered cost effective.

d. If the present worth of the innovative or alternative components is more than 50% of the total present worth of the proposed innovative or alternative system, multiply the total present worth of the least costly noninnovative system by 1.15.

Result: The total present worth of the proposed innovative or alternative system should be less than the result of (d) to be considered cost effective.

Example 4 shows the application of the I&A cost preference.

5.7.1.5
MULTIPLE PURPOSE PROJECTS

Use the Alternate Justifiable Expenditure method (AJE) described in Figure 3 to determine grant eligible costs for most multiple purpose projects. These projects are defined in section 5.6.3.8.

If a multiple purpose project is the most cost-effective way of

Examples for Calculating Present Worth and Equivalent Uniform Annual Cost

EXAMPLE 1: Constant O&M Costs

Given:

sewage treatment plant #1:
capacity: 10 mgd;
average flow through plant: 9 mgd;
planning period: 20 years;
salvage value at end of 20 years: $0;
capital cost of plant: $3 million;
average annual operation and maintenance cost: $190,000;
discount rate: 7 3/8 %.

Determine: Present worth and equivalent uniform annual cost of this plant over 20 years.

Method: Present worth equals capital cost plus the present worth of the operating and maintenance costs. Equivalent uniform annual cost equals the present worth times the appropriate capital recovery factor.

Step 1:

Capital cost . . . . $3,000,000.

Step 2:

Present worth of annual O&M cost equals annual O&M costs times the uniform series present worth factor @ 7 3/8% for 20 years.
Thus:

$190,000 (10.292) $1,955,500

Step 3:

Sum of figures obtained in above steps yields present worth

capital cost $3,000,000
present worth of O&M cost. $1,955,500

PRESENT WORTH. $4,955,500

Step 4:

To find equivalent uniform annual cost, multiply present worth obtained above times the capital recovery factor @ 7 3/8% for 20 years.
Thus:

$5,013,000 (.0972) . . . . $ 481,700

EXAMPLE 2: Varying O&M Costs

Given:

sewage treatment plant #2:
capacity: 10 mgd;
average flow through plant: increase linearly from 2 mgd to 10 mgd over 20 years;
planning period: 20 years;
salvage value at end of 20 years: $0;
capital cost of plant: $3,000,000;
constant annual O&M cost: $126,000;
variable annual O&M cost: increases linearly from $0 to $68,000 in year 20;
discount rate: 7 3/8 %.

Determine: Present worth and average equivalent uniform cost of this plant over 20 years.

Method: Present worth equals the sum of capital cost plus present worth of constant O&M cost, plus present worth of the gradient series of variable O&M cost. Equivalent uniform annual cost is derived as in the first example.

Step 1:

Capital cost $3,000,000

Step 2:

To find present worth of operating costs, calculate the present worths of constant costs and variable costs separately.

a. Present worth of constant annual costs equals that cost times the uniform series present worth factor @ 7 3/8% for 20 years. Thus:

   $126,000 (10.292). $1,296,800

b. Present worth of a variable cost increasing linearly is found by first finding amount of increase per year. This amount is $68,000 divided by 20 years or $3,400 per year. This increase is known as a gradient series. This series times the correct gradient series present worth factor @ 7 3/8 % for 20 years yields present worth of variable cost. Thus:

   $3,400 (74.211). $252,300

Example 2: Varying O&M Costs (continued)

Step 3:

Sum of figures obtained in steps above yields present worth:

capital cost	$3,000,000
present worth of constant O&M costs.	$1,296,300
present worth of variable O&M costs.	$ 252,300
PRESENT WORTH.	$4,549,100

Step 4:

As before, present worth times capital recovery factor @ 7 3/8% for 20 years will yield equivalent uniform annual cost. Thus:

$4,549,100 (.0972) . . . . $ 442,200

EXAMPLE 3: Varying O&M Cost, Phased Construction, and Salvage Value

Given:

sewage treatment plant #3:
capacity: year 1-10, 5 mgd; years 11-20, 10 mgd;
average flow through plant: increase linearly from 2 mgd to 10 mgd over 20 years;
planning period: 20 years;
salvage value at end of 20 years: $750,000;
capital cost of plant (5 mgd): $2,000,000;
future capital cost at year 10 to expand to 10 mgd: $1,500,000;
O&M costs:

a. constant annual O&M cost, years 1-10: $84,000;

b. variable annual O&M cost, years 1-10; increases linearly from $0-$29,000 in year 10;

c. constant annual O&M cost, years 11-20: $165,000;

d. variable annual O&M cost, years 11-20: increases linearly from $0-$29,000 in year 20.

discount rate: 7 3/8 %.

Determine: Present worth and annual equivalent uniform cost of plant over 20 years.

Method: Present worth is derived as in previous example; but this time calculate O&M costs from year 1 through year 10 and O&M costs for years 11 through 20 separately. Also add present worth of expansion and subtract present worth of salvage value from present worth of other costs. Equivalent uniform annual costs are calculated as before.

Step 1:

Initial capital cost $2,000,000

Step 2:

Calculate present worth of O&M costs as follows:

a. Present worth of constant annual cost years 1-10 equals given cost times uniform series present worth factors @ 7 3/8% for 10 years. Thus:

$84,000 (6.903). . . . . $ 579,800

b. Present worth of variable O&M costs years 1-10 equals gradient series ($2,900) times present worth factor of a gradient series @ 7 3/8% for 10 years.
Thus:

$2,900 (27.047). . . . . $ 78,400

c. Present worth of constant O&M costs year 11-20 are first calculated as in (a) above using given cost for years 11-20. This, however, yields present worth in year 11 which must be converted to present worth in year 1. This is accomplished by multiplying present worth (year 11) times single payment present worth factor @ 7 3/8% for 10 years (.4909). Thus, present worth in year 1 equals:

$165,000 (6.903)(.4909). . . . . $ 559,100

d. Present worth of variable O&M costs years 11-20 are first calculated as in (b) above using gradient series for years 11-20 which is $2,900. This yields present worth in year 11 which again must be converted to present worth in year 1 by multiplying present worth (year 11) times single payment present worth factor 7 3/8% for 10 years (.4909). Thus:

$2,000 (27.047)(.4909) . . . . $ 38,500

Example 3: Varying O&M Costs, Etc. (continued)

Step 3:

Present worth of expansion cost which occurs at year 10, times single payment present worth factor @ 7 3/8% for 10 years. Thus:

$1,500,000 (.4909) . . . . $ 736,400

Step 4:

Present worth of salvage value at end of 20 years equals that value times single payment present worth factor @ 7 3/8% for 20 years. Thus:

$750,000 (.2410) . . . . $ 180,800

Step 5:

The sums of values obtained in steps 1, 2, and 3 minus value obtained in step 4 equals present worth of plant. Thus:

initial capital cost	$2,000,000
present worth of constant O&M years 1-10	$ 579,000
present worth of variable O&M years 1-10	$ 78,400
present worth of constant O&M years 11-20.	$ 559,100
present worth of variable O&M years 11-20.	$ 38,500
present worth of expansion at year 10. . . .	$ 736,400
Total.	$3,992,200

Subtract from total the present worth of salvage value:

present worth of salvage value	$ 180,800
PRESENT WORTH of plant	$3,811,400

Step 6:

As before, present worth just derived times the capital recovery factor @ 7 3/8% for 20 years will yield average annual equivalent cost. Thus:

$3,811,400 (.0972) . . . . $ 370,500

EXAMPLE 4. Application of I&A Cost Preference

Given:

A proposed innovative system has passed the risk test and fulfills the requirements of 20% energy savings. The primary and secondary process components are considered innovative.

The present worth costs of the proposed system and the least costly noninnovative system are shown below:

	Least Costly Noninnovative System		Proposed Innovative System	
	Capital Cost	Present Worth*	Capital Cost	Present Worth*
Primary	100	110	31	35
Secondary	720	753	830	905
AWT	873	971	873	971
Total	$1,693	$1,834	$1,734	$1,911

*Includes O&M.

Determine: Whether innovative system is cost effective by application of cost-preference procedures described in section 5.7.1.4.

a. $35 + $905 = $940 (total present worth of innovative components).

b. $\frac{\$\ 940}{\$1,911}$ = 49% (percentage of total present worth represented by innovative components; note: less than 50%).

c. (1) $110 + $753 = $863 (present worth of replaced components in least costly noninnovative system).

(2) $863 (1.15) = $992.45 (application of cost preference multiplier);

(3) $992.45 + $971 = $1,963 (determination of cost ceiling).

Result: $1,911 is less than $1,963; therefore, proposed innovative system is considered cost effective.

GRANT CALCULATION:

Capital costs of IorA components (85% grant)
$31 + $830 = $861 (.85) . . . . $ 731.85

Capital costs of Non-IorA components (75% grant)
$873 (.75). . . . . $ 654.75

Total Grant. $1,386.60

satisfying enforceable requirements for CSOs, (section 5.6.3.5), it should be treated as a single purpose project in determining grant eligibility. Keep in mind that I&A portions of projects get a 15% cost preference (section 5.6.3.2). If the project is cost effective, it is the preferred alternative regardless of what other purposes it serves.

Multiple purpose projects that combine wastewater treatment with recreation (section 5.7.7) can be funded at the level of the most cost-effective, single purpose alternative. Incremental costs of the recreation component that exceed the most cost-effective, single purpose alternative cannot be grant funded. To determine what percentage of a recreation project is grant eligible, proceed as follows:

Calculate the grant eligibility percentage (a), by dividing the present worth of the cost-effective pollution control alternative (b), by the present worth of the multiple purpose project (c), and multiplying the result by 100. Or:

$$(a) = 100 \times \frac{(b)}{(c)}$$

Another simpler means of determining eligibility can be used for proposed projects that involve clearly separate recreational components that are part of an otherwise single purpose project. Here the grant-eligible cost simply equals the total capital cost of ~~the~~ single purpose components.

The basic principle behind the Alternative Justifiable Expenditure (AJE) method is to allocate costs of a multiple purpose project among its purposes. Figure 3 describes the AJE method and illustrates its use. Grant funding is based on the cost of the pollution control component plus a portion of the joint cost. This policy assumes that achieving several purposes at the same time should be less costly than achieving them separately and that all purposes should share in the cost savings. The grant eligibility for multiple purpose projects of this type will ordinarily be less than the eligibility of a single purpose project with the same pollution-control objectives.

To determine the Step 2 and Step 3 grant amount for each component of a multiple purpose project, first multiply the cost of the component by the grant-eligible percentage determined in the cost allocation. The resulting amount is then multiplied by 75% for a non-I&A component and 85% for an I&A component (section 5.6.3.2). Funding at 85% for I&A technology is limited to project portions specifically identified as I&A unit processes, I&A unit operations, or other components uniquely necessary for proper functioning of the I&A components.

Guidance on grant increase eligibility and cost-effectiveness preference for I&A components is found in 35 Appendix E, the Innovative and Alternative Technology Assessment Manual (MCD-53), and in section 5.7.1.4.

5.7.2
FINANCIAL IMPACT EVALUATION

To ensure proper construction, operation, and maintenance of treatment facilities, the community must be able to raise sufficient

Figure 3

THE ALTERNATIVE JUSTIFIABLE EXPENDITURE METHOD OF COST ALLOCATION

The alternative justifiable expenditure method is fundamentally based on the justified investment for each function. That justified investment is taken to be the cost of the most economical alternative single purpose project which will achieve substantially the same benefits as does that function in the multiple purpose project. That investment, sometimes called the alternative justifiable investment, represents the largest amount which could justifiably be expended on the function in the multiple purpose project, for, in most instances, no more should be spent on a purpose than the cost of producing those benefits from the least expensive alternative source.

The cost allocation steps are:

1. Estimate the costs of most cost-effective, single purpose projects to obtain the same objectives as those of the multiple purpose project.

2. Determine the respective specific costs of each purpose in the multiple purpose project. The specific costs of a purpose are the sum of costs assignable to each project component exclusively serving that single purpose. An example of a specific cost would be the cost of a treatment plant included in a project designed to improve urban drainage and reduce pollution from combined sewer overflows.

3. Deduct the specific cost of each purpose in the multiple purpose project from the single purpose project cost.

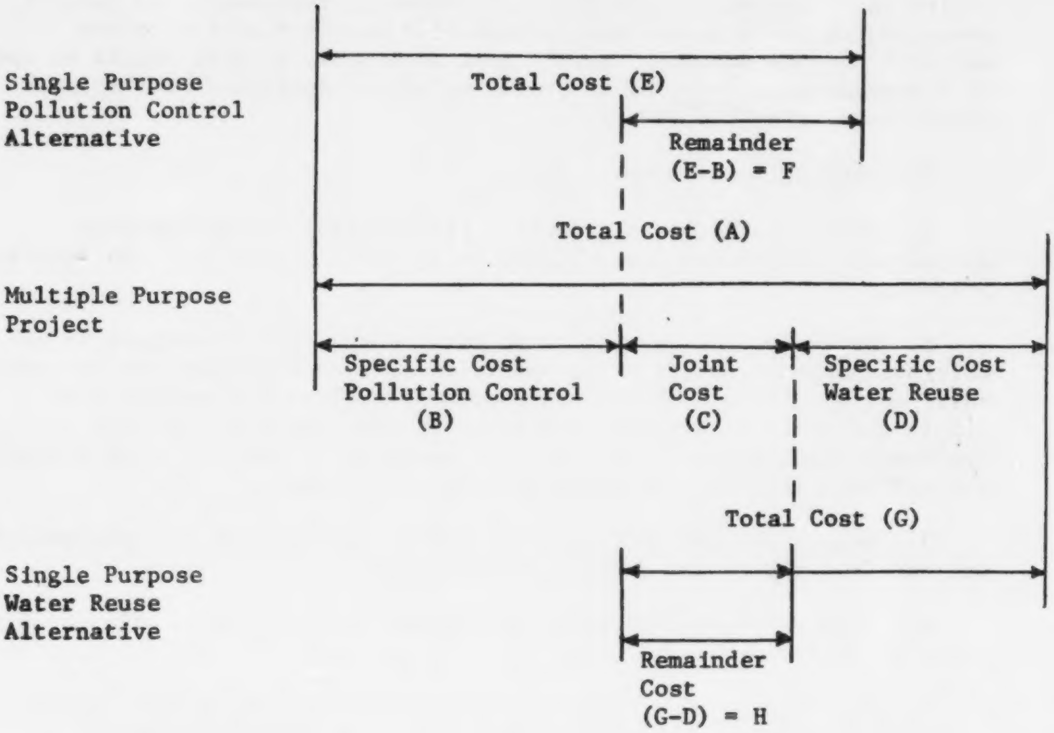
4. From total cost of multiple purpose project deduct all specific costs to determine joint costs.

5. Distribute joint costs of the multiple purpose project among purposes in direct proportion to the remainders found in step 3.

6. To obtain allocated costs for each purpose, add the specific and the distributed joint costs for each purpose.

It should be noted that none of the purposes will be assigned costs which are greater than the cost of the most cost-effective single purpose project nor less than the specific cost of the purpose.

Figure 3: ALTERNATIVE JUSTIFIABLE EXPENDITURE METHOD (continued)


Single Purpose
Pollution Control
Alternative
Total Cost (E)
Remainder
(E-B) = F
Total Cost (A)
Multiple Purpose
Project
Specific Cost
Pollution Control
(B)
Joint
Cost
(C)
Specific Cost
Water Reuse
(D)
Total Cost (G)
Single Purpose
Water Reuse
Alternative
Remainder
Cost
(G-D) = H

$$\text{Pollution Control Allocation} = B + \left(\frac{F}{F+H}\right) \times C = J$$

$$\text{Water Reuse Allocation} = D + \left(\frac{H}{F+H}\right) \times C = K$$

$$\text{Grant Eligible Fraction} = \left(\frac{J}{K}\right)$$

capital and operating revenue.

The monetary cost analysis (section 5.7.1) includes a thorough evaluation of the costs of various alternatives. But an explicit analysis of the financial constraints that limit a community's ability to finance and operate facilities is not normally included within the analysis. Financial capability analysis performed early in the planning process can be an effective screening tool in the cost-effectiveness analysis.

A financial capability analysis covers three basic areas: (1) the community's financial characteristics, (2) an assessment of the community's ability to support the project, and (3) cost estimates for various alternative systems.

Analysis of the financial characteristics of a community covers existing debt, revenues, assessed value of property, median income, income distribution, rate of population growth, bond ratings, existing sewer system charges, planned capital expenditures, and other factors and trends. Determining whether a community can support a wastewater project requires an analysis of the community's ability to generate necessary income and an analysis of the residents' ability to pay for the project. User charges, which are included in charges to customers, are discussed in section 5.7.8. The screening process should eliminate project alternatives that clearly exceed the community's ability to pay (see worksheet: EPA 68-01-4343).

The financial capability analysis is important in selecting the appropriate technology. For example, the analysis may determine that a community will give weak support to a facility that has high operation and maintenance costs. Here the analysis would show the need for technologies with low or fixed operation and maintenance costs. If the cost-effectiveness analysis shows two alternatives with roughly equivalent present worth, choose the one with the lower cost impacts on the community. The financial capibility analysis is especially important for small rural or semi-rural communities and where receiving waters are water quality limited.

Total annual charges to customers are estimated after Federal and other funding is determined. When total annual charges to customers for wastewater facilities (including debt service, connection costs, and operation and maintenance) exceed the following percentages of annual household median income (1980 dollars), EPA considers the project expensive:

- 1.0% when median income is under $10,000;
- 1.5% when median income is between $10,000 and $17,000;
- 1.75% when median income exceeds $17,000.

EPA and the State agency will intensively review expensive projects. If the proposed project is identified as expensive on the basis of the financial impact analysis or the above rule-of-thumb:

- Review cost-effectiveness analysis to ensure estimates are adequate and accurate (section 5.7.1.2);

- Determine whether high costs are due to water quality limitations and requirements of advanced treatment processes. If so, reconsider alternatives (sections 5.2 and 5.6.3.1);

- Review soundness of local share financing of project (section 5.9.1);

- Pursue other funding sources. Rural areas should look at the Interagency Agreement for Rural Water and Sewer Projects (see section 5.6.2).

5.7.3
ENVIRONMENTAL EVALUATION

When you evaluate alternatives, weigh environmental impacts: adverse and beneficial, direct and indirect, long-term and short-term, irreversible, and induced effects such as changes in development (35.917-1(d)(7) and 6.507 (c)(5)). Weigh carefully potential impacts on environmentally sensitive areas described in section 5.3. For further guidance consult the EPA publication: "Environmental Assessment of Construction Grants Projects" (FRD-5).

5.7.4
EVALUATION OF RELIABILITY

Evaluate each alternative for its ability to meet and maintain effluent limitations and BPWTT (35.917-1(d)(4)). The plan must provide a way to meet these requirements.

5.7.5
EVALUATION OF ENERGY REQUIREMENTS

Facilities plans include an analysis of energy requirements for each alternative system considered (35.917-1(d)(9)). The objective is to select alternatives that reduce consumption or increase recovery of energy. Coordinate evaluation of energy requirements and I&A technologies discussed in section 5.6.3.2. Consider State energy plans in doing this.

5.7.6
EVALUATION OF IMPLEMENTABILITY

Evaluate alternatives for their implementability, taking into account legal, institutional, and financial constraints (6.507(c)(5)). Where several jurisdictions are included in the planning area, implementation of a selected alternative will require intermunicipal agreements (35.917-6). Evaluate alternatives as they affect each jurisdiction in the planning area to ensure all jurisdictions find the selected alternative acceptable and equitable.

5.7.7
EVALUATION OF RECREATIONAL OPPORTUNITIES

Include in your facilities plan an analysis and description of potential opportunities for recreation, open space, and access to bodies of water (35.917-1(j)).

Evaluate the recreational potential of the selected treatment plant site and collection system. Base the analysis on existing data or evaluation of the sites. The analysis need not require extensive new data collection or surveys to determine suitability. The level of detail needed to produce a good recreational use analysis in a facilities plan depends upon the size of the community, the facility, and the suitability of the chosen site for recreation. Provide enough detail in the recreational use analysis to determine the site's potential recreation uses. Show you coordinated the recreation elements of approved water quality management plans with State and local recreation programs; e.g., State Comprehensive Outdoor Recreation Plan or Heritage Conservation and Recreation Service of the United States Department of Interior. Potential recreation benefits associated with wastewater projects include:

- Use of interceptor rights-of-way for running or hiking paths, bicycling or equestrian trails;
- Use of roadway to facilities for access to waterways for canoeing, boating, fishing, or swimming;
- Provision of access to natural areas for camping, photography, or nature appreciation;
- Use of project sites for sports such as target shooting or field sports;
- Use of facilities or sites for educational or information purposes;
- Recreation opportunities at offsite locations such as application of effluent or sludge to improve other recreational areas.

While costs for design and construction of separate recreation facilities are not allowable for funding, costs associated with developing the recreational use evaluation in the plan are. These costs must be identified in the plan of study (section 3.1).

Multipurpose projects that include recreation may also be considered by coupling facilities planning activities with recreation planning. EPA limits the allowable costs of multipurpose projects to the costs of the least costly, single purpose pollution control project (section 5.7.1.5); but inclusion of recreation opportunities in the plan can effectively enhance public support while not significantly increasing the local share of project costs.

5.7.8
COMPARISON OF ALTERNATIVES

Review, summarize, and graphically compare the alternatives' costs, primary energy requirements, environmental impacts, implementability, and other significant factors. See FRD-5, page 12 for sample format.

This information should be based on the supporting analyses elsewhere in the plan. Where quantification is not possible, brief descriptions will serve. The visual display should allow comparison of alternatives at a glance so it can be used at required public meetings (35.917-5(b)(6) and (c)(3)(vii)).

Conduct a midcourse review with EPA and the delegated State before selecting the plan to ensure that all alternatives have been adequately considered, that the findings of the environmental information document or environmental assessment are available, and that the public information requirements have been met (35.917-5(f), 6.507(b), 25.12(a)(2)).

The facilities plan includes an estimate of total project costs and average charges to customers (35.917-1(1)). Charges to customers include costs for existing debt service, debt service on the local share of capital costs, annual operation and maintenance costs for the completed project, connection charges, and other related costs. These requirements ensure that both the local government agencies and residents are aware of their financial obligations under the proposed plan. Local jurisdictions must fully understand these obligations. The regulations require that local jurisdictions agree to pay the non-Federal project costs and that they have the financial capability to construct, operate, and maintain the facilities (35.925-5).

The following costs must be identified for the selected plan, presented at the public hearing, and included in the facilities plan:

- Estimated total capital costs for the recommended treatment works should be broken down into estimated eligible and ineligible costs. Indicate the estimated portions of the project cost to be borne by the Federal, State, and local governments and industry.

- Method of local financing and estimated debt service charge or taxes on the total local capital cost of recommended treatment works;

- Estimated annual operation and maintenance costs broken down into industrial and local government shares.

- Estimated monthly charge for operation and maintenance (user charge); monthly debt service charge; service charges from existing treatment works, both O&M and debt service; estimated connection charge; total of above costs; and the monthly charge to typical residential customer.

5.7.9
VIEWS OF THE PUBLIC AND CONCERNED INTERESTS

Section 2.2 requires a public participation program as part of facilities planning. Requirements are also detailed in 35.917-5, Part 25, and are discussed at the preapplication conference.

Before facilities planning starts, EPA and the State decide whether you need a basic or full-scale program (section 3.2).

A section or chapter of the facilities plan describes the public participation program, outlines the specific coordination tasks completed, or summarizes the program (35.917-1(g)). The facilities plan summarizes public meeting comments and your responses. Include:
(a) text of the public notices;
(b) evidence of compliance with notification requirements such as advertisements or leaflets;
(c) synopses of information presented at the meetings; and (d) any significant comments or statements received. Letters submitted by individuals, groups or agencies are included as an appendix to the plan. Where significant issues surface at meetings or in correspondence, the plan indicates the appropriate response or action taken, justifies controversial findings, or is revised.

A public hearing is required before the facilities plan is formally adopted and submitted to the State agency, (25.2, 35.917-5(b)(7)). Present the proposed plan and alternatives at the hearing for public review and comment. Also, submit the draft facilities plan for review and comment by the State and areawide clearinghouses (35.917-1(f)and section 6.1). After the hearing has been held and comments received, local officials may adopt the proposed plan. A final responsiveness summary and responses to adverse comments are included in the final facilities plan.

5.8
SELECTED PLAN

Selection of the preferred facilities plan is based on evaluation of alternatives for cost effectiveness (economic, environmental, social, and institutional impacts) and public comments. It includes a detailed description of the proposed facilities and addresses items in this section. It clearly names project segments, implementing authority, and approximate construction dates.

5.8.1
JUSTIFICATION FOR PLAN SELECTION

A brief narrative summarizes why the plan was selected. It demonstrates that the plan is the most cost effective and environmentally sound (35.917(b)).

5.8.2
DESCRIPTION OF SELECTED PLAN

Describe the treatment works and the complete wastewater treatment system in detail. Cover all elements, including service areas, collection sewers, interceptors, treatment works, and ultimate disposal of effluent and sludge. Use maps to show locations of major components, existing and proposed, including locations of any individual systems proposed for funding (35.917-1(a) and (b)).

5.8.3
DESIGN OF SELECTED PLAN

Present preliminary engineering data in the plan to show all major components of the system have been included, the cost estimate is adequate and reasonable (consult MCD-5), and the facilities can meet effluent limitations. The level of detail of the preliminary design varies from project to project. It depends on the project's complexity. Discuss this with the project reviewer. For example, standard package plants will not require the same degree of detail as a pure oxygen system with phosphate removal and sludge incineration.

Preliminary design data for treatment facilities should include a simple tabulation (one or two pages) of information such as:

- A description of the selected plan's major features;
- Unit processes and sizes;
- A schematic flow diagram for treatment plants and plant and pumping station siting;
- Sewer lengths and sizing;
- Proposed design criteria, including: detention times, overflow rates, process loadings, removal efficiencies, initial design flow, and reserve capacity.

5.8.4
COST ESTIMATES FOR SELECTED PLAN

The facilities plan provides detailed cost estimates for design, construction, and operation and maintenance of the proposed project (35.917-1(a)). Include an estimate of total project costs (35.917-1(1)) and average annual charges to customers, as described in section 5.7.8.

5.8.5
ENERGY REQUIREMENTS OF SELECTED PLAN

Describe features of the selected plan that conserve, recover, or reduce energy consumption. For systems that claim innovation on the basis of the 20% net primary energy reduction, the plan should contain a detailed energy analysis (35.917-1(d)(9)). Refer to 35 Appendix E and the "Innovative and Alternative Technology Assessment Manual" (MCD-53) for guidance.

5.8.6
ENVIRONMENTAL IMPACTS OF SELECTED PLAN

5.8.6.1
DESCRIPTION OF IMPACTS

The facilities plan describes relevant direct and indirect impacts of the proposed action (6.507(c)(6)). Emphasize:

- The proposed plan's unavoidable adverse impacts, especially on environmentally sensitive areas;

- The relationship between local short-term uses of the environment and the maintenance and enhancement of long-term environmental productivity;

- Irreversible and irretrievable commitments of resources.

The evaluation emphasizes indirect impacts (sections 5.3.10) on environmentally sensitive areas and present and future actions to protect these areas (section 5.3). Interceptors should conform with approved Water Quality Management (WQM) plans and EPA's objectives for minimizing indirect impacts on environmentally sensitive areas. Section 5.6.3.3 discusses this.

5.8.6.2
MITIGATING ADVERSE IMPACTS

Discuss alternate measures to minimize any adverse environmental impacts (6.507(c)(7)). Such measures should include structural and nonstructural components.

Structural measures may involve:

- Changes in design, size, or location of facilities;

- Rerouting of interceptors to avoid sensitive areas;

- Buffer zones or screening for aesthetic purposes;

- Systems for odor control.

Nonstructural components may include:

- Development or enforcement of sewer use regulations;

- Protection of environmentally sensitive areas by local ordinance.

5.9
ARRANGEMENTS FOR IMPLEMENTATION

5.9.1
INSTITUTIONAL RESPONSIBILITIES

The authority that implements the selected plan must have the necessary legal, financial, institutional and managerial resources to ensure the construction, operation, and maintenance of the proposed facilities (35.917-1(h)). Where responsibility for implementation rests with one or more agencies or jurisdictions, include in the plan resolutions or agreements between agencies or government units assuring that the plan has been accepted and will be implemented (35.917-6).

To adequately describe the arrangements for implementation, the plan should:

- Identify each agency or jurisdiction and its responsibility;

- Demonstrate that each agency has the ability and authority under State law (or reasonable expectation of obtaining such authority) to finance, design, construct, operate, and maintain those facilities within its jurisdiction;

- Identify any referendums or public elections necessary to implement the plan;

- Include adopted resolutions of plan acceptance and agreements among jurisdictions;

- Include proposed method of allocating estimated O&M costs, debt service costs, and connection charges among participating communities and among various users and user classes;

- Include financial arrangements that obligate each jurisdiction to enforce the requirements for user charges, sewer system rehabilitation, and sewer use ordinance;

- Identify jurisdictions that oppose or have failed to approve the plan and describe steps necessary to reach agreement.

In addition to assessing the local financial resources, alternative sources of funds should also be identified.

Some capital expenditures could be met through creative financing techniques using special improvement districts, industry assistance to local governments, or intergovernmental agreements. The institutional arrangements will have a strong influence on the feasibility of alternatives. You should structure those arrangements to ensure your agency continues to meet the financial eligibility requirements of 35.917-1(h).

It may be possible to reduce the local share of capital costs by using funds available from State and Federal agencies, such as Farmers Home Administration, Housing and Urban Development, and Community Services Administration. Requirements for funding from other agencies' programs will vary and some communities may not qualify. A thorough investigation during facilities planning of all possible sources of funding will ensure that the local share is available.

The financial and institutional arrangements provide you and the project reviewer with a starting point in an overall financial assessment. A schedule for marketing bonds and developing a user charge system can be developed during Step 1. These can be adjusted during subsequent design and construction.

5.9.2
CIVIL RIGHTS COMPLIANCE

The facilities plan needs to comply with the requirements of the Civil Rights Act of 1964, Part 7, and 35.917-1(i). Include in the plan a statement that these requirements have been met. Where minority areas are included in the facilities planning area, show in the plan that such areas will be served or excluded from service for cost effectiveness reasons.

5.9.3
SITE AVAILABILITY

Include in the plan a statement concerning the availability and estimated costs of sites proposed for facilities (35.917-1(m)).

5.9.4
OPERATION AND MAINTENANCE (O&M) REQUIREMENTS

The facilities plan includes basic information on the requirements for adequate operation and maintenance of the proposed facilities, such as: sewers, pump stations, sewage treatment plant. This information conforms with that developed for the cost-effectiveness calculations and demonstrates that the costs are based on a reasonable assessment of the staffing, management, training, sampling, and analysis requirements essential for effective operation and maintenance.

5.9.5 PRETREATMENT PROGRAM

Development of a pretreatment program is required where the municipal facilities serve or will serve industries subject to pretreatment standards under the Clean Water Act (35.917-1(k), 35.907 and Part 403.8). Industrial use of municipal facilities is discussed in section 5.6.3.6.

A pretreatment program is intended to control pollutants from non-domestic sources and to provide for the reclamation and reuse of wastes wherever practicable.

The objectives are: (a) To prevent the introduction into the treatment plant of pollutants that will interfere with plant operation, or disposal or use of municipal sludge; (b) To prevent the introduction into the treatment plant of pollutants that will pass through the plant into receiving waters or that will be otherwise harmful; (c) When possible to recycle and reclaim wastewater and sludge produced by wastewater treatment.

A document "Municipal Pretreatment Program Guidance Package" is available from Municipal Technology Branch (WH-547), USEPA, Washington, D.C. 20460; (202) 426-8976.

A complete and approvable pretreatment program includes the following:

- An industrial survey that identifies system user by type and location of industry and the character and volume of pollutants discharged;

- An evaluation of the legal authority for control and enforcement, including adequacy of enabling legislation and selection of mechanisms to be used, (e.g., ordinances, codes);

- An evaluation of revenue sources and financial programs to ensure adequate funding to carry out the pretreatment programs;

- A determination of technical information needed to support development of an industrial waste enforcement mechanism to ensure compliance with NPDES permit conditions;

- The design of enforcement monitoring programs;

- A determination of pollutant removals in existing treatment facilities;

- A preliminary determination of monitoring equipment required at the treatment facilities;

- A determination of tolerance of the treatment facilities to toxic pollutants;

- A preliminary determination of the municipal facilities needed for monitoring or analysis of industrial wastes.

5.9.6 IMPLEMENTATION STEPS

The facilities plan should include a schedule of specific actions to implement the plan and to meet its objectives on schedule. The dates in this schedule should correspond to compliance dates specified in your NPDES permits (if applicable). Resolve differences that would result in failure to meet the compliance schedule, including, if necessary, a formal request through the State agency for extension of compliance dates (35.935-9(b)).

CHAPTER 6

REVIEW, CERTIFICATION AND APPROVAL OF PLANS

6. REVIEW, CERTIFICATION AND APPROVAL OF PLANS

This chapter describes the administrative procedures for submission of a facilities plan, including review by:

- State and Local A-95 clearinghouses;
- WQM agency (for conformance with WQM plan);
- State (for compliance with State and Federal statutory and regulatory requirements);
- EPA (where not delegated to a State, for compliance with Federal requirements).

6.1 CLEARINGHOUSE COMMENTS (A-95 REVIEW)

Include with the completed facilities plan comments or approvals from relevant State, local and Federal agencies, by way of State and areawide clearinghouses, (35.917-1(f), section 3.2.4). Office of Management and Budget Circulár A-95 requires such reviews (30.305-8(b)(2)).

Before providing a completed facilities plan to the State agency, send a copy to clearinghouses designated for your project area. Do this as soon as possible to allow time for response by the clearinghouses and to minimize delays in subsequent reviews. The clearinghouses have 30 calendar days to review the facilities plan and return comments to you. Once received, these comments are to be included in the completed facilities plan package when it is sent to the State. If the clearinghouses cannot complete their review in the time allotted, they have to inform you within that time. If this happens you should contact the project reviewer for specific advice. Where an agency or clearinghouse makes adverse comments, include a statement that explains how the comments were considered.

The draft facilities plan should be submitted to the A-95 clearinghouse 30 calendar days before the public hearing on the plan.

If the EPA regional administrator determines that a public hearing is not required, the plan should be submitted to the clearinghouses a reasonable amount of time before submission to the State for review.

If the proposed project is substantially modified as a result of the facilities plan review by the State or EPA (described in sections 6.2 and 7), it may be necessary to obtain clearinghouse comments on the revised facilities plan again. However, once A-95 review has been completed for a facilities plan, additional review of the Step 2 and Step 3 applications that will implement the plan is seldom required.

Check with the clearinghouses to ensure that the A-95 review of the facilities plan will suffice if other Federal funds; e.g.; from Farmers Home Administration, Economic Development Administration, or Housing and Urban Development, are to supplement EPA funding of the same project.

6.2
STATE REVIEW AND CERTIFICATION TO EPA

Upon receipt of State and areawide clearinghouse comment on the completed facilities plan (or if 30 days pass without response), submit the review package with comments to the State project reviewer. The package should include:

- The number of copies of the facilities plan required by the State;
- 2 copies of all documents required by OMB Circular A-95 (see section 6.1);
- 1 original and 1 copy of the letter from the grantee's authorized official requesting review and approval of the facilities plan and indicating:
  - --the grantee has met all requirements for public participation relating to facilities planning;
  - --the names of all jurisdictions within the planning area which either oppose the plan or have failed to approve the plan.

The project reviewer will use this document to review the plan and contact you if there are any discrepancies. You are responsible for providing requested information or otherwise responding as appropriate. Problems between you and the State should be resolved before review by EPA unless concurrent review (in nondelegated States) is included in a contracted work schedule. EPA will not approve a facilities plan without State certification (35.917-7) that the completed facilities plan:

- Conforms with the regulatory requirements described in section 5;
- Has been made available to the concerned WQM planning agency, if any, for comment;
- Conforms with completed WQM plans that have been approved.

Upon completion of the State review, the project reviewer will prepare a certification letter for the project. The State then sends the approved plan with the certification letter signed by the appropriate State official to the EPA regional office. A copy of the transmittal letter will notify you.

6.3
REVISIONS OF PLANS

A facilities plan that has served as the basis for award of a Step 2 or Step 3 grant will be reviewed by the State before application for any subsequent Step 2 and Step 3 grant to determine if the plan needs to be revised.

Revisions to the plan should be accompanied by a statement on the status of plan implementation as of the revision date. The appropriate EPA regional administrator, A-95 clearinghouses, and State should be notified at least 30 days before you modify the plan. Processing of revised plans follows the procedures outlined above.

CHAPTER 7

EPA REVIEW AND APPROVAL OF FACILITIES PLANS

7.

EPA REVIEW AND APPROVAL OF FACILITIES PLANS

EPA will take final actions only on facilities plans that have State approval and certification. The State should send the following documents to EPA:

- A letter signed by the chief official of the State water pollution control agency requesting review and approval and certifying that:

  --The plan complies with requirements of the construction grants regulations;

  --The plan conforms to a State WQM plan;

  --The WQM planning agency, if any, has had an opportunity to comment on the plan, and the plan conforms to any approved WQM plan.

- The number of copies of the plan required by EPA;

- 1 copy of the letter from the local agency to the State (required under section 6.2).

Partial submittals may be made and reviewed before completion of all requirements, but final action will not be taken until all requirements are met. You will be notified when your plan is approved.

7.1

MANAGEMENT OF THE FACILITIES PLANNING PROCESS

EPA in consultation with the States may designate a selected project as "fast track" to help priority projects comply with NPDES permit conditions or to correct significant public health or water quality problems. Fast-track projects must have a midcourse review meeting. EPA's goal is to complete most fast-track facilities planning in 24 months.

Conversely, if your facilities planning experiences extensive and uninterrupted periods when no progress is made because no funding for a subsequent step is scheduled within 5 years, it may be considered inactive until subsequent steps are scheduled and progress resumes.

7.2

PRE-STEP 2 APPLICATION CONSIDERATIONS

As your Step 1 planning nears completion, begin thinking early about the procedures and requirements for your Step 2 (design) grant. Some of these considerations are discussed in this section.

7.2.1

STATE PROJECT PRIORITY LIST

Similar to your Step 1 grant, your Step 2 project usually is listed on the State project priority list to receive a grant. As your Step 1 project nears completion, contact the State to determine what information is necessary for your project to be listed on the priority list. The State will want to know at a minimum when you expect to submit a Step 2 application and your estimated Step 2 cost.

7.2.2
ENGINEERING CONSULTANT

You will need a consulting engineer to prepare plans and specifications for the project you selected in your Step 1 planning.

You have a choice at this point about your engineering consultant. If you are satisfied with your present engineer, if your engineer did all or part of your Step 1 planning, and if your engineer has the capability of doing the design, you may continue with the same engineer without advertising and going through procurement procedures. The only requirement is that you negotiate a new contract and price for the Step 2 work.

If you want to change engineers, follow the procurement procedures, including advertising, receipt of proposals, and contract negotiations to get competent professional engineering design services at a fair and reasonable price.

Whichever choice you make, begin early to discuss the scope of services and the type of contract. Do not sign a contract but proceed up to that point.

7.2.3
INTERMUNICIPAL AGREEMENTS

If your project serves two or more jurisdictions, you should have a proposed intermunicipal agreement at the time of Step 2 application. The agreement includes financial arrangements, a user charge system, a sewer-use ordinance, and any other considerations that constitute a working agreement among the municipalities. Intermunicipal agreements are time consuming to negotiate, so a head start will help prevent delays.

7.2.4
OTHER CONSIDERATIONS

Other requirements to be satisfied during the Step 2 work are:

- User Charge System--The written procedure you adopt to collect fees from users of your treatment system to pay costs of operation and maintenance.
- Sewer Use Ordinance--A municipal ordinance that forbids illegal connections to the sewer system and specifies other limitations on sewer use.
- Federal Facilities--If a Federal facility; e.g., Air Force base, is to be connected to the wastewater treatment system, follow special procedures. Discuss this with the project reviewer.
- Relocation--If people will be relocated because of your project, follow certain procedures. Contact the project reviewer.
- Dredge and Fill Permits--If your project requires that material be removed from or placed in a body of water, you may need a determination from the Army Corps of Engineers that they will issue a permit before EPA allows the project to be designed.
- Pretreatment Program--If an industrial pretreatment program is required and you have not completed planning for it during your

Step 1 planning, the pretreatment planning is to be completed during Step 2. If this is the case, make arrangements with your engineer to include this in his scope of work.

- Public Participation--You may continue your public participation program in the Step 2 design phase if you think it would be helpful. If you do, include the costs in your application and decide who will do the work.

7.2.5 SUMMARY CHECKLIST

The completion of a facilities plan is not easy unless a generic plan is used. However, your project and its water quality improvements will be of great importance to your community. The time and effort spent in planning your project is well worthwhile.

We have summarized below the major items to be considered during and at the conclusion of Step 1 planning. Use the checklist to ensure that all applicable items have been considered.

- Sign and accept your EPA grant.
- Finalize other grant or loan requests as appropriate.
- Arrange for the balance of the local funds needed.
- Execute an agreement with your consultants and issue a notice to begin work.
- Arrange and conduct meetings with your project team.
- Begin work on your public participation work plan and submit to the State within 45 days after accepting grant.
- Coordinate with WQM agency if applicable.

Facilities Plan: Periodically check on progress of:

- Population and flow forecasts; obtain State agreement.
- Infiltration/inflow analysis if applicable. Watch timing and obtain State agreement of results.
- Possible use of generic plan for small communities (consult project reviewer).
- Alternative development:
  - --Land application;
  - --Small wastewater systems;
  - --Centralized treatment;
  - --Rehabilitation of existing system;
  - --Innovative and alternative technology;
  - --No action.
- Environmental assessment of alternatives as integral part of facilities plan.
- Alternatives evaluation based on:
  - --Costs;
  - --Engineering feasibility;
  - --Environmental impacts;
  - --Public acceptance;
  - --Implementability.
- Public participation program. Get public and interest groups involved.

Facilities Plan review by:

- WQM agency;
- Clearinghouse (A-95);
- State agency.

Critical Topics: Be sure the following areas receive close attention:

- Detail of facilities plan;
- Coordination with WQM agencies;
- Procurement of consultants;
- Population and flow forecasts;
- Public participation;
- Alternatives development and analysis;
- Effluent limitations;
- Disposal of residuals;
- Intermunicipal agreements;
- Pretreatment program;
- Preliminary cost estimates;

Project Administration: Check on:

- Filing system;
- Accounting records;
- Payment requests;
- Force account.

Pre-Step 2 Application Considerations: Begin working on or considering the following items:

- State project priority list (contact State);
- Engineering consultant's contract;
- Intermunicipal agreements (develop proposed agreements);
- Other considerations:
  --User charge system;
  --Sewer use ordinance;
  --Other Federal facilities;
  --Relocation;
  --Dredge and fill permits;
  --Pretreatment program;
  --Public participation

APPENDIX A

Preambles to Construction Grants Regulations

(Discussion of Regulation Development)

You should consult the full text of the construction grants regulations contained in the Code of Federal Regulations (CFR), the July 1, 1980 edition, as Title 40, Part 35, Subpart E. The preambles which follow are published here only because they are not included in the CFR.

Preamble to the September 27, 1978, edition of the construction grants program regulations. Published in the Federal Register, Vol. 43 No. 188, pages 44022 - 44049.

Preamble to the February 16, 1979, amendments to the construction grants program regulations on public participation (35.903, 35.917-1, 35.920-3, 35.928-1, 35.929-2 and 35.928-1, 35.929-2 and 35.940-1). Published in the Federal Register, Vol. 44, No. 34, pages 10300 - 10302.

Preamble to the July 5, 1979, miscellaneous amendments to the Construction Grants Program Regulations (35.910-10, 35.925-15, 35.936-13(a)(1) and (3), and Appendix E, paragraphs 6e. (1) and (2). Published in the Federal Register, Vol. 44 No. 130, pages 39228 - 39339.

[6560-01]

Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

[FRL 951-8]

PART 35—STATE AND LOCAL ASSISTANCE

Subpart E—Grants For Construction of Treatment Works

AGENCY: Environmental Protection Agency.

ACTION: Rule.

SUMMARY: This is a conformed version of regulations governing the construction grants program for municipal wastewater treatment works. The substantial changes in the regulations serve several purposes. The majority of the changes implement amendments to the Federal Water Pollution Control Act (FWPCA or the Act) as amended, contained in the Clean Water Act of 1977 (Pub. L. 95-217 or the 1977 Act). The regulations also contain a series of technical amendments that make technical, administrative, and programmatic changes to facilitate administration of and participation in the program. The regulations incorporate certain requirements and incentives to implement the pretreatment program for industries contributing to municipal wastewater treatment works. To enhance public involvement in the program, the regulations add public participation activities in the development of State project priorities as well as in the approval of State-prepared population projections in the cost-effectiveness analysis guidelines. Cost-effectiveness analysis guidelines are completely revised to reflect provisions of the 1977 Act and other major policies. Finally, in response to Executive Order 12044 on improving government regulations, we have made numerous editorial changes to make the regulations more understandable.

DATES: These final rules are effective on October 1, 1978, unless otherwise specified in particular sections. They apply to grants (including subsequent related projects) awarded on or after that date. Comments on changes proposed to § 35.936-13 will be accepted until November 30, 1978.

ADDRESSES: Comments submitted on these regulations may be inspected at the Public Information Reference Unit, EPA Headquarters, Room 2922, Waterside Mall, 401 M Street SW., Washington, D.C., between 8 a.m. and 4:30 p.m., on business days. EPA-prepared summaries of the comments are also available. Comments on proposed changes to § 35.936-13 should be sent (in triplicate, if possible) to Mr. Alexander J. Greene, Director, Grants Administration Division, Attention: PM-216-P "Subpart E," Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT:

Michael B. Cook, Acting Director, Facility Requirements Division (WH-547), Environmental Protection Agency, 401 M Street SW., Room E1137D, Washington, D.C. 20460, telephone 202-426-9404.

SUPPLEMENTARY INFORMATION: Certain regulatory changes to implement the 1977 Act were published on April 25, 1978, in the FEDERAL REGISTER as interim final regulations. These included changes related to State priorities, grant eligible categories, land eligibility, user charges, industrial cost recovery, grants for individual systems, combined step 2 and 3 grants, training facility grants, Buy America, cost-effectiveness analysis and reserve capacity. We published these regulations as interim final and generally made them effective on April 25, 1978, because they implement provisions in the 1977 Act that were effective upon enactment and because they were necessary for ongoing administration of the program. Some of the technical amendments, which were published in FEDERAL REGISTER on June 2, 1978, as the proposed rules, made changes to the same sections. The provisions can be distinguished by reading the discussions in this preamble and referring back to the earlier FEDERAL REGISTER publications, where the regulatory changes are set forth section by section. The remainder of the regulatory changes that implement the 1977 Act were proposed on April 25, 1978, because, under the 1977 Act, they are not effective until October 1, 1978, or because their implementation was not crucial to the program's operation. These include provisions on innovative and alternative technologies, recreational, and open space uses, and the provision of assistance by EPA to grant recipients with respect to contracts.

EPA conducted extensive public participation activities in the development of these regulations. Prior to initial publication of any of the regulations in the FEDERAL REGISTER, EPA circulated four drafts of the regulations implementing the Clean Water Act. Also in the drafts were changes on pretreatment and public participation. We conducted numerous meetings to solicit public input. These included 4 days of open meetings in Washington, D.C., six briefings for State and local officials held at EPA regional offices, and meetings for EPA advisory groups. Three meetings were held with State representatives appointed by the National Governors' Conference and by the Association of State and Interstate Water Pollution Control Agencies. Two meetings were held with the Association of Metropolitan Sewerage Agencies, two meetings were held with the Management Advisory Group, and presentations were made at the government affairs seminar of the Water Pollution Control Federation. We consulted representatives of Federal agencies informally. During this prepublication period of 4 months we received over 1,000 written comments from State, regional, and municipal agencies; environmental and special interest groups; and the public generally. We circulated one draft of the technical amendments to 1,000 organizations and private citizens before publication in the FEDERAL REGISTER.

On April 25, 1978, EPA published proposed and interim final regulatory changes to implement the 1977 Act, to modify pretreatment requirements, and to add certain public participation activities. On June 2, 1978, EPA published technical amendments to the construction grants regulations as proposed rules. After publication of the regulations, several environmental and special interest groups coordinated five areawide conferences on the regulations in Atlanta, Chicago, Dallas, Philadelphia, and San Francisco. These meetings were attended by 1,000 people.

During June, EPA regional offices conducted 14 public meetings to solicit comments. The EPA officials responsible for development of the regulations made presentations and answered questions. The regional offices encouraged participation by a combination of press releases, mailings and telephone contacts to interested and affected organizations. EPA officials directly responsible for the regulations met informally with representatives of other Federal agencies, environmental, and special interest groups. They also answered innumerable telephone inquiries about the regulations. EPA received over 250 comments on the April 25 regulations and over 45 on the technical amendments published on June 2. These comments and summaries are available for inspection at the EPA Public Information Reference Unit at the address listed above.

Using the comments received during and after the comment period, EPA revised the April 25 regulations. We mailed the revised draft to more than 930 groups, agencies and persons that commented on prior drafts. We received quick responses from various groups and considered their comments in preparing the final regulations. Besides the revisions to the April 25 regulations, the final regulations included both revisions to the technical amendments and editorial changes.

Altogether the Agency circulated more than 60,000 copies of various drafts of the regulations. We received invaluable assistance from the organizations, agencies, and the public at large. Commenters raised a variety of issues. The major issues raised during the official comment period are discussed below under the appropriate subject area.

Various related regulations have been or will be published soon. As required by statutory deadline, EPA published two short amendments to the construction grants program regulations early this year. On January 10, 1978 (43 FR 1597), fiscal years 1978-81 authorizations were allotted. On June 29, 1978 (43 FR 28202), we published a correction of the section number for the allotment regulation. It is § 35.910-8 in this conformed regulation. On February 23, 1978 (43 FR 7426), the reimbursement grant regulations (subpt. D) were revised to extend eligibility dates. On June 26, 1978 (43 FR 27736), EPA published final pretreatment regulations as 40 CFR part 403. Those regulations establish the responsibilities of Government, industry, and the public to implement national pretreatment standards to control pollutants that pass through or interfere with treatment processes in publicly-owned treatment works or that may contaminate sewage sludge.

On August 7, 1978, we published proposed regulations on public participation in the FEDERAL REGISTER (43 FR 34794). Those regulations implement section 101(e) of the FWPCA which requires EPA to provide for, encourage, and assist public participation in EPA programs. The regulations would replace 40 CFR part 105 (Public Participation in Water Pollution Control) and 40 CFR part 249 (Public Participation in Solid Waste Management) with a new 40 CFR part 25.

References to part 25 are inserted in this regulation in anticipation of publication of final public participation regulations. In the interim any reference to part 25 in these regulations should be interpreted as referencing the current part 105 regulations. The new part 25 would establish overall public participation requirements for programs under the Clean Water Act, the Safe Drinking Water Act, and the Resource Conservation and Recovery Act. The regulations, in addition, revise public participation requirements in 40 CFR part 35 subpart E, specifically for the construction grants program. They focus the public's attention on decisions made during the planning of the wastewater treatment facilities. They also provide the opportunity for public involvement in later stages of project development.

EPA published proposed regulations for the water quality management program in the FEDERAL REGISTER on September 12, 1978 (43 FR 40742). Those regulations replace 40 CFR parts 130 and 131 and portions of part 35 with a new 40 CFR part 35, subpart G. The regulations govern the water quality management program under sections 106, 208, and 303(e) of the FWPCA and include changes made to implement provisions of the 1977 Act. The regulations require a State/EPA agreement, which is intended to serve as the principal management tool for the water quality management program. The State/EPA agreement will integrate the planning, management, and implementation of all water quality management programs under the Clean Water Act, RCRA, and SDWA by fiscal year 1980. At a minimum, the fiscal year 1979 agreement shall cover programs authorized by sections 106, 205(g), 208, 303, and 314 of the Clean Water Act. The State/EPA agreement is distinct from the construction grant delegation agreements that may be negotiated under section 205(g) of the FWPCA, as amended by the 1977 Act. The water quality management (WQM) regulations coordinate the establishment of State and areawide WQM agencies' sewage treatment priorities with the construction grants priority system and lists. WQM plans are to provide certain facility planning related information such as planning area delineations, waste load allocations, and population projection disaggregations. Construction grant facility plans will have to be based on this information. Overall the WQM program regulations link that program and the construction grants program together much more closely.

On September 20, 1978 (43 FR 42251) we published in the FEDERAL REGISTER final regulations on State management assistance grants (subpt. F). They make funds available to States to manage the construction grants program and to hire and train staff needed to implement delegated functions.

From time to time EPA issues guidance and technical information to supplement regulations and to assist those participating and interested in EPA programs. A listing of information and copies may be obtained from the General Services Administration (8FSS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, Colo. 80225. (See § 35.900(c).)

Discussion of the regulatory changes being made are grouped by subject matter. Following the discussion of each subject area, the preamble identifies those sections in the regulations related to the subject areas that are changed. For the technical amendments each section containing a change is discussed separately.

STATE PRIORITY

Sections 20 and 40 of the 1977 Act modified the policy and procedures applicable to State project priority planning and clarified the intent of Congress regarding the roles and responsibilities of the States in preparation of priority lists. These new provisions of the Act require several modifications to the procedures used by the States in managing their priority lists. Established priority rating and ranking criteria that are consistent with applicable guidance and these regulations need not be changed.

The 1977 Act gives the States exclusive authority to rank categories of projects. The categories specified in the 1977 Act are those used in the survey of the cost of needed publicly-owned treatment works (the needs survey) and have been defined in detail in previously published guidance for the survey. The regulations have been written so that no State is required to assign a different ranking to categories of projects, but it may do so on an optional basis.

States are expected to continue to use priority criteria based on the severity of the pollution problem, the existing population affected, and other related factors necessary to meet statutory requirements. All projects on the priority lists, including those benefiting from the setaside provisions, must be rated according to the priority criteria and subject to the management procedures contained in the approved State priority system. When preparing their priority lists, States must take into account the work completed by designated State and areawide agencies responsible for water quality management.

The legislative history of the 1977 Act indicates that State priority list planning and management must be closely linked to meeting unfilled treatment needs before other eligible treatment works may be funded. The 1977 Act specifically requires, with one exception, that only projects resulting in compliance with the enforceable requirements of the Act may be included on the State's priority list. Projects on the State list which do not meet this requirement are to be removed and alternate projects which do meet the requirements added to use available funds.

Several commenters on the regulations expressed concern that the section on State priorities was very long compared with the relatively short reference to priorities in the Clean Water Act. We believe that these comments result from a misunderstanding of the role of the priority system and priority lists in the construction grants program. The priority system and lists are the principal mechanisms in the program for selecting who will be in line for grant funds, for scheduling grants, for planning obligations and outlays of funds, and for providing information to justify congressional authorizations and appropriations. The priority system and lists are, in short, the management tools which allow the Federal, State, and local governments to plan, budget, and oversee the construction grants program.

The 1977 Act complicated the task of management by imposing new requirements for planning and set-asides which must be met for the orderly progress of the grants program. At the same time, the Congress provided for State management assistance grants to increase revenues available to States to handle added managerial responsibilities. The grants program will not be able to maintain a proper balance and an orderly flow of step 1, 2, and 3 projects at the rate necessary to utilize the $24.5 billion authorized by Congress without a sound managerial system such as that established for State priority systems and lists.

Some commenters stated that the priority system should not have to be submitted annually to EPA, but rather only when revised. EPA agrees and has changed the regulation accordingly.

Several commenters recommended additions to the criteria forming the basis for the State priority system, including national priorities, public health, economic hardship, workers' health and safety, evidence of past or present discrimination in the use of grant funds, and groundwater pollution. We believe, however, that the criteria selected are those most relevant to achieve the goals of the Clean Water Act.

The Council on Environmental Quality recommended that water improvement be reinstated as the main goal of the priority system. We agree and have changed the regulation accordingly.

Enforceable requirements. The enforceable requirements of the Act, as defined in this regulation, are limitations or conditions of a 402 or 404 permit which, if violated, could result in a civil or criminal action under section 309 of the Act. Where a permit has not been issued, the term includes any requirement that in the judgment of the Regional Administrator would be included in the permit when issued. Where a permit is not applicable the term shall include any requirement which the Regional Administrator determines is necessary to meet applicable criteria for best practicable waste treatment technology (BPWTT).

This definition covers municipal pollution of surface water and groundwater. Permits issued under section 402 of the Act incorporate surface discharge requirements imposed by sections 301, 403, and 405. Section 301, in turn, requires BPWTT or any more stringent level of treatment determined in the water quality management planning process (authorized under sections 208 and 303) to be necessary to meet water quality standards. It also requires any more stringent level of treatment found to be necessary to meet State laws or regulations (under authority preserved by section 510).

To receive construction grants, municipal treatment works are required under section 201(g)(2)(A) of the Act to provide for the application of BPWTT. Information published by the Agency on BPWTT contains criteria which must be met by grant funded projects involving land application techniques, land utilization practices and alternatives involving reuse and recycling. These criteria, designed to protect groundwater from pollution by municipal treatment facilities, are analogous to effluent limitations and conditions in permits designed to protect surface waters.

We received several comments requesting that the definition of enforceable requirements list sections 201, 208, 301, 309, 402, and 405 of the Act. Some comments also suggested a reference to section 510. We have carefully considered these comments but decided to retain the same definition used in the interim regulation. As was discussed above, our definition encompasses these other sections of the Act to the extent they are translated into specific requirements to protect and improve ground and surface water quality. To the extent they are not translated into such specific requirements, grantees, States, and EPA would have difficulty determining if a project was necessary to meet them or not.

A few commenters expressed concern that the definition of enforceable requirements adopted by EPA would exclude projects involving reuse and recycling which were not necessary to protect ground or surface waters. The Agency believes that such projects should be excluded from the definition. Federal assistance for publicly owned treatment works under the Act is intended to correct and reduce the backlog of pollution problems.

The Act and Agency policy strongly encourage reuse and recycling techniques as a means to meet pollutant discharge requirements. Reuse and recycling projects which are needed to meet the enforceable requirements of the Act should be given higher priority. The regulations have numerous provisions to encourage reuse and recycling, including changes between the interim and final versions of the cost effectiveness guidelines to allow additional projects to qualify for the 115 percent cost preference (see section 7 of appendix A).

Priority list management. Priority list management procedures have been clarified in the new regulations to assure that EPA, the States and municipalities each know which projects will be funded with available monies during the current year, and which projects may expect funding during subsequent years. In addition, the new procedures require documentation and notification to interested parties of any changes to the funding plans. The fundable portion of the priority list has been defined to include only projects planned for funding with available funds during the first year of the 5-year period. Procedures are established to allow a project on the fundable portion of the priority list to be bypassed when the State documents and notifies the grant applicant that it cannot be ready for award during the current year. Projects that are ranked highest on the planning portion of the priority list will replace the project which is not ready to proceed. In most cases, the project bypass procedure is not expected to constitute a significant revision to the priority list, and additional public participation should not be required.

An alternative to the bypass procedure was carefully considered but eventually rejected. This alternative would allow a State to include on the fundable portion all projects that could conceivably be ready for award during the funding year without regard to the limits of available allotments. Bypass procedures would be unnecessary, as all potential projects would be included on the fundable portion of the list. This approach was rejected because it would potentially allow high priority projects to go unfunded even though ready to proceed during the funding year in favor of lower priority projects. It also would create a great deal of uncertainty about which projects would be approved during the funding year and which would not.

There are other priority list management procedures required by the new regulations, most based on existing policy and guidance. The regulations require some increase to the project information included on the priority list and an improvement to the public participation process. Supplemental guidance will be issued to further define these requirements and provide the phasing necessary to avoid disruption of State operations.

A few commenters expressed concern that the bypass procedures created undue administrative difficulties for the States. We believe, however, that without such procedures, the goal of the priority list to insure that funding is first available to projects with highest priority, could easily be thwarted. One commenter stated that the bypass provisions were too vague and could be abused. We believe that they have been defined in sufficient detail for a regulation. Additional guidance could be issued if abuses develop.

One commenter stated that adding and deleting projects to an approved priority list is very difficult. We agree that such changes are not easy. Significant changes are likely to disrupt plans for one or more municipalities and should be made only after careful consideration and opportunity for public participation.

Several States recommended changes to the regulation to restrict further the role of EPA in review of the priority list. We disagree with these recommendations because the management role of the Agency has already been reduced to the minimum necessary to insure equitable implementation of the Clean Water Act and related regulations.

Five-year priority list. The interim regulations for State priority list management require a 5-year priority list to ensure that projects are planned and managed in accordance with an overall multiple-year operating strategy. In preparing the priority list, consideration must be given to the inventory of all needed publicly owned treatment works within a State. The most recent Needs Survey should be used for this purpose. Sufficient information, including cost data, is readily available from this Survey allowing the development of a long-term priority list without undue additional effort on the part of the State.

Several commenters expressed concern that excessive information was required on the priority list. EPA agrees and has revised the regulations so that requirements for the planning portion of the list will be detailed in supplemental guidance. The Agency will require only the minimum amount of information commensurate with the requirements of program management and public participation. The remaining requirements are essential to insure orderly development of projects which will utilize available funds and set-asides, while meeting the most critical needs for water pollution control.

A few commenters said that information required on the priority list is not appropriate for public review. We believe that the required information provides the essentials of what is required for the public, including an address where more information may be obtained on individual projects.

Comments were also received recommending separate priority lists for projects utilizing set-aside funds for small communities and for innovative and alternative technologies. The Agency has allowed and will continue to allow a separate priority list for small communities where desired by a State and where the splitting of funds between the list for small communities and other communities is justified on a sound basis. Our experience is that such lists are difficult to administer. The complexity would be compounded where States could not tell with certainty whether or not a project might qualify for a set-aside. The regulation does allow a higher priority to be given to projects qualifying for the set-asides.

Several commenters expressed concern about the relationship between the needs survey and the priority list. A few commenters said that EPA should not expect the States to prepare the needs survey. We would emphasize that this was not our intent. Our interest is in having the priority list prepared on the basis of the needs inventory, and to cross reference the needs inventory so that the Agency and the States can readily ascertain which needs are planned to be met and which are not. Other commenters stated that there should be no relationship between the needs inventory and the priority list. We disagree because of the critical role the needs inventory plays in the grants program. The needs inventory includes all existing and needed treatment works. This inventory is used for program planning, oversight, and evaluation. The needs are, of course, also used by Congress as a basis for allotting grant funds among the States. When preparing the priority list, States should review the needs inventory and give highest priority to those facilities with the most critical need. After a new facility is funded, the needs inventory will be revised by EPA accordingly.

Pipe-related projects. One exception to the stipulation that all projects on the priority list must meet the enforceable requirements is provided in the Act. This exception is for projects involving major sewer rehabilitation, interceptor sewers, collector sewers, and correction of combined sewer overflows. States may, at their option, include on the fundable portion of their list facilities in these categories with a combined estimated EPA share of as much as 25 percent of the available allotment. Facilities in these categories which would use funds beyond the 25-percent level may be included on the list only where they are essential to meet the enforceable requirements of the Act.

Comments on the Agency's interpretation of the 25-percent provision fell into two groups. One group stated that all projects must satisfy the test of being necessary to meet the enforceable requirements of the Act whether or not they fall into the sewer-related categories. EPA disagrees with this interpretation because it necessarily results in vitiating almost all meaning from the 25-percent provision of section 216. Moreover, it would prevent some projects, such as those necessary to protect public health but not ground or surface waters, from being retained on the priority list. Congress clearly did not intend this result.

The other group of commenters on the 25-percent provision stated that we have misconstrued the law by stating that the 25-percent was a ceiling rather than a floor for sewer-related projects in the specified categories. We would note, however, that the 25-percent ceiling is imposed in our regulations only for sewer-related projects which cannot be justified as necessary to meet the enforceable requirements of the Act. No limitation is placed upon such projects when necessary to meet the enforceable requirements of the Act so long as they are placed on the priority list in conformance with the State priority system and are found to be grant eligible.

The Agency received several comments interpreting the regulations to imply that all projects placed on the priority list are automatically eligible for funding. This is not the case. Projects should be placed on the priority list only if they are expected to be eligible. However, there may not be sufficient information available to determine its eligibility at the time the priority list is prepared. Projects later found to be ineligible should be removed from the priority list. This requirement applies to pipe-related projects placed on the priority list under the 25-percent provision as well as other types of projects. A project must ultimately be determined cost-effective as well as eligible to receive a construction grant.

New set-asides on priority list. The Act contains a number of new provisions that require States to set aside funds for specific purposes. Included in these set-asides is a reserve for alternatives to conventional treatment for communities with populations of 3,500 or less, or the sparsely populated areas of larger communities. Rural States must set aside 4 percent of their allotment for such projects. Other States have the option of setting aside no more than 4 percent of their allotments for this purpose. In addition, 2 percent of the allotment for fiscal year 1979 and fiscal year 1980 and 3 percent of the allotment for fiscal year 1981 must be used only for grant increases for innovative and alternative treatment processes. At least one-half of 1 percent of the allotment (part of the 2 percent) must be used for grant increases for innovative technology during these years.

Nothing in this regulation is to affect existing administrative policy for the establishment of a separate funding strategy for small communities where a State chooses to set aside a reasonable percentage of its funds for the projects of such small communities.

Several commenters recommended that a higher priority be allowed for innovative and alternative projects at the step 3 stage as well as the step 2 stage, and also for projects to pay 100 percent of the costs of replacement when an innovative or alternative project fails. EPA agrees and has revised the regulation accordingly. One commenter said that the higher priority at the step 2 stage for innovative and alternative projects should be mandatory. EPA disagrees since the 1977 Act clearly leaves it optional.

A few commenters asked for a detailed definition in the regulation of what would qualify as a sparsely populated area of a larger community. Any area where treatment works serving an individual residence or cluster of residences are cost-effective will, in all likelihood, qualify as sparsely populated.

Public participation. This provision of the new regulation has generated many comments. These comments are almost equally divided expressing both sides of the issue. Public interest groups and private citizens largely desire more and better information and express an interest in sharing in the decisions which affect their lives and the well-being of their communities, while comments from others cite the additional expense, time delay and relatively small anticipated benefits to the public that may be associated with these new requirements. This issue is of concern to the Agency. These provisions are being retained as in the interim regulation, but will be monitored to determine if they should be changed in the future. Regulatory changes related to State priority planning and management are limited to the revision to § 35.915.

INNOVATIVE AND ALTERNATIVE TECHNOLOGIES

Under the new section 201(g)(5), after September 30, 1978, grant recipients are required to analyse innovative and alternative treatment processes and techniques for use in wastewater treatment works. Section 201(i) requires the encouragement of processes that reduce energy needs. Section 202(a)(2) provides for Federal grants for 85 percent of allowable construction costs for treatment works or significant portions of treatment works that utilize innovative and alternative treatment processes and techniques. Section 202(a)(3) provides 100 percent Federal grants for replacement or modification of treatment works constructed in accordance with section 202(a)(2), under certain conditions. Section 202(a)(4) defines the eligible treatment works that can be the subject of 85-percent grants. These provisions and others in the 1977 Act that involve innovative and alternative technologies depend upon guidelines authorized by section 304(d)(3) that set forth criteria to be utilized in identifying innovative and alternative technologies.

Regulations discussed under other headings contain several important provisions relating to innovative and alternative technologies. The cost-effectiveness guidelines permit a 15-percent cost preference for treatment works that utilize innovative or alternative processes or techniques. Under the regulations on priorities a funding reserve is established to pay for the increased part of the grants for treatment works that include innovative or alternative processes or techniques. Also, States are authorized to give higher priority to treatment works utilizing innovative or alternative technologies. A 4-percent reserve of each State's yearly allotment is set aside to fund alternatives to conventional treatment works in small communities.

The Clean Water Act of 1977 and its legislative history make it clear that the provisions pertaining to innovative and alternative technologies are intended to achieve greater use of systems which reclaim and reuse water, productively recycle wastewater constituents or otherwise eliminate the discharge of pollutants, or recover energy. The principal difference between alternative and innovative wastewater treatment technologies, as viewed by the 1977 Act and its legislative history, is the degree to which they have been developed and implemented. Alternative wastewater treatment processes and techniques are those which have been proven and used in actual practice; innovative processes and techniques are developed methods which have not been fully proven under the circumstances of their contemplated use. The goal of achieving greater recycling and reclamation, however, is clearly indicated as being an objective common to both innovative and alternative technologies.

In order to carry out this mandate of the law, the regulations developed for identification of innovative technologies take distinctly different approaches with respect to systems which incorporate wastewater reclamation and energy recovery as compared to those which are based on the conventional concept of treatment by means of biological or physical/chemical unit processes and discharge to surface waters. Accordingly, treatment and discharge processes such as primary treatment, suspended-growth or attached-growth biological systems for secondary or advanced wastewater treatment, physical/chemical treatment, disinfection and sludge processing must meet rigorous criteria pertaining to cost reduction or energy reduction in order to be considered innovative. Land application and water reuse systems for the treatment and management of wastewaters and sludges as well as energy recovery systems can be classified as innovative by applying either the cost or energy reduction criterion. They can also be classified as innovative if they represent a significant advancement in terms of greater operational reliability, better management of toxic materials, increased environmental benefits, or improved methods for joint treatment and management of municipal and industrial waste. These six criteria help define innovative processes and techniques and are listed in appendix E, section 6.

Comments received since the publication of the proposed rules on April 25 have been extremely useful to EPA. Following is a summary of pertinent comments on major issues, along with EPA's decision on how to proceed.

One area of comment centered around the 100-percent Federal grant to modify or replace malfunctioning treatment works constructed under an 85-percent grant. The proposed length of time following completion of a project during which such grants would be available drew considerable response. Many commenters supported a 3- to 5-year trial period, while others proposed different time periods for alternative and innovative projects. Still others supported the proposed 2-year interval. Related to the question of the length of the period of availability is the point at which the period commences. Suggested options included the date of initial full-scale operation, the date of completion of construction, the date of final inspection, and the date of final audit.

The Agency has decided to allow 2 years beginning with the date of final inspection. This provides for a definite commencement date. Since final inspection typically occurs 6 to 12 months after completion of the treatment works and a period of plant operation, this resolution in effect allows a 2-year period of observation after the treatment works is fully operational.

Some commenters requested that the regulations spell out the procedure for applying for the 100-percent modification grant. Such procedures will be the subject of future program guidance. Grant recipients will initiate the procedures by giving written notification of failure within the 2-year period discussed above to the State and EPA. Commenters raised some questions concerning the ways in which such grants will be funded. The priority system will be used with modification grants being made from general allotment funds. We are changing the regulations on priority lists previously published to allow consideration of the need for 100-percent modification grants in the determination of State priorities.

A second major area of comment concerned the reserve to be used for increasing grants for innovative and alternative projects from 75 percent to 85 percent. Many commenters were critical of the proposed Agency interpretation of this reserve as the maximum amount of allotted funds available for such grant increases. The Agency received and studied thoughtful analyses of the issue from the State of California, the Council on Environmental Quality, the League of Women Voters of the United States and others. Contrary to the commenters, we firmly believe that a thorough analysis of all pertinent provisions of the 1977 Act and its legislative history leads to the conclusion that the reserve is the maximum to be used to increase grants from 75 to 85 percent from funds allotted for fiscal years 1979 through 1981. This conclusion is bolstered by sound policy and administrative considerations and by the Agency's understanding of the provisions based upon extensive contacts with congressional committees during the months of preparation leading to enactment of the 1977 Act.

The 1977 Act establishes what amounts to a special program within the construction grants program to fund innovative and alternative processes and techniques. The key provisions are in sections 202(a) and 205(i). They authorize 85-percent grants; establish a special fund to increase the grants from 75 to 85 percent; provide a backup "insurance" grant for failures; and define the treatment works eligible for the 85-percent grants. All of these provisions must be read together to understand congressional intent on the question. Legislative history, especially from the conference committee report, further substantiates EPA's conclusion.

Some commenters argued that treatment of the 205(i) reserve as a maximum runs counter to the promotion of innovative and alternative technologies, which should be EPA's policy. Under the 1977 Act, EPA is implementing a variety of provisions that collectively make the encouragement of innovative and alternative technologies a major thrust of the construction grants and related programs. Nevertheless, EPA must conduct its activities within the confines of its legislative mandate.

Akin to the policy argument, one commenter recommended that EPA treat the 205(i) reserve as a minimum amount available because that would promote the overall objective of the Act—to maintain the physical, chemical and biological integrity of the Nation's waters. We believe that treatment of the reserve as a maximum amount will actually do more to promote the overall objective. This is so because EPA's approach allows more communities to be given grants at the 75-percent level to deal with their water quality problems.

A few pragmatic considerations were also raised. Some commenters argued that the 205(i) reserve is insufficient to accommodate all innovative and alternative projects and that States need the financial incentive to encourage these projects. Most indications at present are that a few States may have more projects than can be funded from the reserve. Most, however, will find it difficult to use up the reserve. The time needed to plan and design projects will cut significantly into the 3-year authorization. It is in part for this reason the EPA is permitting certain 1978 grants that qualify to be supplemented by 10 percent from the 1979 reserve. In addition, there is a major incentive for States to use the 205(i) funds rather than lose them to reallotment. If a State does not use the reserve while it is available, it not only loses the unused funds, but it cannot share in the overall reallotment of construction grant funds from States that did not obligate them.

Finally, it was argued with some merit that the interpretation as a maximum could cause delays because communities that cannot get an 85-percent grant one year may wait until the ensuing year to apply. This could occur. Two things militate against it. Funds are only authorized for 3 years. Most States will have ample funds the first year, and no one can delay beyond the third year of authorization. Additionally, delay might cost a community its position on the priority list. If any risk is apparent, a community is not likely to delay.

For these reasons, EPA is retaining its interpretation that the 205(i) reserve is the maximum amount to be spent to increase grants from 75 to 85 percent for innovative and alternative technologies.

Several States and others indicated that the distribution of the 2-percent reserve according to the chronological approval of grants is too inflexible. EPA agrees. Other approaches recommended, such as use of the priority system or establishment of criteria to choose the most desirable projects, also have serious drawbacks. Recognizing that States will want to handle the matter in different ways, EPA has made chronological approval a general rule but gives States the option of establishing a different method in cooperation wth the EPA Regional Administrator.

Commenter made several proposals for reallotment of any unused portion of the 2-percent reserve. Some supported the proposed return of such funds to the general pool which is divided among States that have used all their general funds. Others favored the establishment of a special reserve that would be reallotted to States that have used up their 2-percent innovative/alternative set-aside. Another proposal was that such surpluses be used to help fund 100-percent modification/replacement grants.

Unused portions of the 2-percent reserve must be reallotted under section 205(b)(1) of the Act along with all reallotted funds. The EPA Administrator has some leeway in determining the manner of distribution of the reallotted funds. Under current regulations, reallotted funds are distributed to States that used their prior year's full allotment. EPA will reallot the reserve in the same manner. It should be noted that if a State loses funds to reallotment, whether these funds are from reserves or from general grant funds, then the State cannot receive funds from the overall reallotment.

The establishment of special funds is constrained by the reallotment provisions in section 205(b)(1). Special funds would have to be established in each State that participates in any reallotment. This would require an extra set of bureaucratic procedures that would be too burdensome and unwarranted for the potential benefits.

Some questions have been raised regarding the extent of the 85-percent grants—whether they will cover the costs of an entire treatment works or just that portion of the treatment works deemed innovative or alternative. The April 25 proposed rules adopted a 50-percent cutoff rule. Under that approach, if the present worth of innovative or alternative parts of the treatment works exceeds 50 percent of the total present worth cost of the non-sewer-related part of the treatment works, then the entire treatment works would be eligible for the 85-percent grant. Otherwise, only the innovative or alternative parts would be eligible. Support for this scheme is based largely upon administrative grounds.

Many persuasive comments have argued for an incremental approach, under which only innovative or alternative portions of treatment works would be eligible for 85-percent funding. The costs of an entire treatment facility would be covered by such a grant only if the whole project had been deemed innovative or alternative. The relationship between present worth of innovative or alternative parts and total present worth would no longer be important in determining what portion of a project was eligible for the 85-percent grant.

There are several grounds for favoring the incremental approach. It would be only slightly more difficult to administer than would the 50-percent cutoff approach, which utilizes the incremental approach on projects below the 50-percent level. It would spread the 2-percent reserve to more innovative and alternative projects and would use the reserve only on innovative and alternative processes and techniques. It would remove the pressure on consulting engineers to make every project at least reach the 51-percent mark. It would provide incentives to engineers and grantees to use as much innovative and alternative technology as possible. For these reasons, EPA is adopting the incremental approach under which only innovative and alternative unit processes and techniques will receive 85-percent funding.

Some commenters expressed concerns related to criteria in section 6 of appendix E for identifying innovative technology. These comments principally were directed at the cost and energy reduction criteria. Specifically, the comments indicated that (1) cost and energy reduction were not among the objectives envisioned by the Congress in authorizing specific innovative and alternative technology; (2) the accuracy of cost and energy analyses in facility plans is not sufficient to allow a meaningful comparison; and (3) the 15-percent cost reduction and 20-percent energy reduction criteria are either too easy or too difficult to achieve. A related comment suggested that using the most cost-effective alternative as the basis for comparison in the case of energy reduction (paragraph 6.e.(2) of appendix E of the proposed regulations) may not result in actual energy savings if the cost-effective noninnovative alternative for a particular project happens to be energy intensive.

The Agency disagrees with the comment that cost and energy reduction are not valid criteria for innovative technology as envisioned by the Congress. There are numerous references to cost and energy reduction in the legislative history of the 1977 Act which indicate reliance on these factors for the evaluation of innovative and alternative technology.

Likewise, no change was made with respect to the percentage decrease in cost or energy necessary to qualify a project as innovative. The Agency believes that the proposed criteria set forth substantial, yet achievable, goals with respect to cost and energy reduction. In recognition of some of the comments received, several changes were incorporated into the final regulations to insure that the cost and energy benefits claimed as the basis for designating a project as innovative are not just "paper savings" but are savings actually realized by the grantee municipalities.

These changes include: (1) authority for the Regional Administrator to deny a 10-percent grant increase for step 3 projects where one or more of the criteria upon which the innovative technology designation was based are not verified by the plans and specifications prepared for the project (§ 35.930-5(b)); (2) authority for the Regional Administrator to make an initial determination on whether a project is innovative after plans and specifications prepared for the project in step 2 are sufficiently completed to verify conformance with the criteria for innovative technology (§ 35.930-5(b)); (3) a requirement that facility plans contain analyses in sufficient detail to substantiate claimed cost or energy savings when these factors are proposed as the basis for an innovative technology designation (§ 35.917-1 and paragraph 5.a of appendix A); and (4) comparison with the least net energy, noninnovative alternative as the basis for determining whether a process or technique is innovative on the basis of energy savings (paragraph 6.e.(2) of appendix E).

The Agency is also preparing detailed guidance which contains information on a wide range of presently used processes and techniques to assist in the evaluation of innovative and alternative technology. Additionally, the Agency recently published a detailed study of the operational energy requirements for municipal wastewater treatment plants. The Agency has initiated another more comprehensive energy study, which should be available next year.

Paragraph 6.a. of appendix E indicates that the Regional Administrator may consult with EPA Headquarters as to whether a particular process or technique is innovative and as to determinations made in other EPA Regions about similar processes and techniques. As part of its implementation of these provisions, EPA is considering mechanisms to provide these capabilities to the Regional Offices. One possibility being actively considered is formation of a group or groups of technical experts to assist in determinations of innovative technologies both on a national level and on a regional basis. The contemplated composition of such groups would include qualified individuals from both Government and private industry. Also being considered is a data management operation which would catalog basic technical information on the various innovative projects implemented across the country. The objective of such an operation would be to establish and give the EPA Regions access to the pertinent information on related projects under consideration or approved elsewhere. More specific information on these efforts will be forthcoming in the form of program directives issued by the construction grants program.

Paragraph (b)(3) of § 35.908 of the proposed regulations indicated that projects or portions of projects which received step 2, step 3 or step 2+3 grant awards after December 27, 1977, may receive grant increases from funds allotted for fiscal year 1979 if they meet the criteria for innovative or alternative technologies in appendix E. Comments were received that the intent of the law to foster implementation of innovative and alternative technology by providing financial and other incentives was not being achieved by allowing these incentives to be applied to projects which already have received step 2 or step 3 grants or have approved facility plans. Plainly stated, these comments indicated that additional incentives in the context of those provided by the Clean Water Act of 1977 were not necessary to implement the technology because approval and acceptance of the project had already been obtained. The Agency agrees with these comments insofar as they apply to innovative technology projects. Criteria for innovative processes and techniques are based upon the concept of advancement of technology in comparison to currently accepted systems. This comparison implies a baseline of technology against which improvements in systems will be measured. Treatment processes and techniques which have been selected through the evaluation of alternatives in the facility planning process prior to initiation of the innovative/alternative technology program will be considered the baseline of accepted technology against which candidate innovative technology projects should be compared. This applies equally to more recently developed systems already incorporated into grant projects by virtue of the fact that such systems have been successfully subjected to the scrutiny of the construction grant process in order to receive project approval. As previously indicated, the Agency is developing guidance which will aid in making comparisons of candidate innovative technology with accepted "baseline" technology.

We proposed criteria to identify innovative projects on April 25, 1978. They become effective in final form on October 1, 1978. Projects reviewed and approved between December 27, 1977, and October 1, 1978, were not evaluated on the basis of these criteria. They were approved under then existing criteria and as such were approved as accepted conventional or alternative systems.

For these reasons, the reference to innovative technology has been deleted from § 35.908(b)(3). Eligible portions of projects that received step 2, step 3, or step 2+3 grants after December 27, 1977, from funds allotted or reallotted in fiscal year 1978, may still receive grant increases from funds allotted for fiscal year 1979 if they meet the criteria for alternative technology in appendix E. This extension of grant increases to certain alternative technology projects is based upon the fact that such projects provide for the reclamation and reuse of wastewater and wastewater constituents or recover energy in accordance with the principal objective of the innovative/alternative technology provisions of the Clean Water Act. Furthermore, designations of these projects as alternative technology projects do not in any way depend upon a baseline comparison with other technology as is the case with innovative technology. Also, allowance of supplemental grants for alternative projects avoids possible delays in applications for grants and helps States use their reserves for the 10-percent grant increase in fiscal year 1979.

The end result of the Agency's position is fairly simple. We will begin making 85-percent grants for innovative projects after September 30, 1978, with fiscal year 1979 funds. Projects utilizing alternative technology that received 75-percent grants after December 27, 1977, from funds allotted or reallotted for fiscal year 1978, may receive a 10-percent grant increase from fiscal year 1979 funds.

A number of comments were received as to whether a particular technology or piece of equipment is innovative. Similar inquiries asked whether EPA would certify specific processes and techniques as innovative. Other related questions asked how many times a technology could be funded through the construction grants program before it ceased to be innovative.

In considering the response to these questions, it is important to note that the Agency has not in the past adopted uniform standards or specified processes and designs to be used in grant projects. Project approval is made on a case-by-case basis in accordance with broad evaluation criteria developed for the program. In keeping with this overall program structure, the Agency will not designate or certify that a specific process or technique is innovative. The designation of innovative technology will be applied on a project-by-project basis. Thus, individual projects may be determined to be innovative on the basis of their conformance with the criteria set forth in section 6 of appendix E.

As stated in paragraph 6.a. of appendix E, the Regional Administrator mav consider local variations in geographic or climatic conditions which affect treatment plant design or operation in making a determination on innovative technology projects. Thus a particular process or technique may be considered innovative technology in one project but not another. Similarly, it is possible that a novel combination of processes and techniques, which individually may not be considered innovative, could qualify a project as innovative if it can be demonstrated that the project contributes to the advancement of technology and otherwise achieves the basic objectives of the innovative and alternative technology provisions of the Act.

In accordance with the above discussion, it is not possible to specify how many projects of a certain type may be approved before a particular technology is no longer considered innovative. Furthermore, because the innovative/alternative technology program authorized by the Clean Water Act presently extends only for 3 years, it will often not be possible to verify the performance of certain innovative processes and techniques through actual operation during this 3-year period. For these reasons, as stated in paragraph 6.d. of appendix E, it is possible to fund a number of projects using the same type of innovative technology where the potential benefits are great in comparison to the risks.

We also received comments on the relationship of patents and bid specifications to innovative technology. Specifically, these commenters were concerned that patent and bid specification requirements may restrict the implementation of innovative technology.

The patent requirements applicable to construction grant projects are contained in 40 CFR Part 30. The Agency is presently reviewing these regulations to determine their impact on innovative technology projects. If, as a result of this evaluation, modification of part 30 appears to be advisable, such modification will be proposed separately at a later date. Otherwise, the matter of patents with respect to innovative technology will be clarified by Agency guidance to insure that no unnecessary impediments are created due to uncertainty in this area.

Section 204(a)(6) of the Act states in part, that no bid specification for construction grant projects shall be written in such a manner as to contain proprietary, exclusionary or discriminatory requirements unless such requirements are necessary to test or demonstrate a specific process or technique. Accordingly, it is possible that restrictive bid specifications may be written for innovative technology projects when sufficient justification is provided to substantiate that such specifications are necessary to test or demonstrate a specific process. We are revising §§ 35.908, 35.936-13 and program requirements memorandum 75-5, which implements this section of the Act, to clarify this point.

These new program provisions necessitated a minor revision to clause 2 (responsibility of the engineer) of appendix C-1. We have changed the reference from "advanced" technology in § 35.908 to "innovative" technology.

Regulatory changes relating to innovative or alternative technologies are made in §§ 35.908, 35.917-1(d), 35.930-5, 35.935-20, 35-936-13, appendix A, section 7, appendix C-1, clause 2, and appendix E.

INDIVIDUAL SYSTEMS

Section 14 of the 1977 Act authorizes grants for privately-owned treatment works serving one or more principal residences or small commercial establishments constructed prior to and inhabited on or before December 27, 1977. These systems are intended to abate an existing water pollution or public health problem. A public body (municipality) must apply on behalf of a number of such units and certify that public ownership of such works is not feasible. The public body must certify that the treatment works will be properly maintained and operated. User charges are required for cost of operation and maintenance. Commercial users must pay back the Federal share of the cost of construction with no moratorium during the industrial cost recovery study, and the 25,000 gallons per day exemption does not apply. (See discussion of industrial cost recovery below.) We have decided that nonprofit and nongovernmental institutional entities, such as churches, schools, hospitals, and charitable organizations, for purposes of this special authority generally should be treated the same as small commercial establishments. The alternative selected must be cost-effective.

This section is intended to be utilized to construct alternative or unconventional treatment works for individual residences or clusters of residences. Alternatives include, but are not limited to, septic tanks and subsurface disposal systems, other on-site systems including dual systems, small systems serving clusters of households or commercial users, and pressure and vacuum sewers. Alternative sytems can be innovative. Though small publicly-owned systems for one or more homes or small commercial establishments are not covered under § 35.918, they are covered under regulations governing grants for publicly-owned treatment works and are grant eligible. Additional guidance will be issued on the conditions under which small publicly-owned systems may be funded. As alternative systems, these individual systems are eligible for the 4 percent set aside. Both publicly-owned and privately-owned individual systems, as alternatives to conventional technology, are eligible for an additional 10 percent of the eligible costs for those projects where funds are available from the set-aside for innovative and alternative technology. However, privately-owned individual systems are not eligible for the 115 percent cost preference for alternative and innovative processes and techniques in the cost-effectiveness analysis.

Acquisition of land for individual systems is not grant eligible because there is no indication in the law or legislative history that Congress intended the limited funds available to be expended for what clearly would be a windfall to private landowners. Construction of individual systems may supplement other types of wastewater treatment works, conventional and unconventional, in the same planning area as determined to be cost-effective.

A major issue arising in the course of preparing the interim regulations was to what extent monitoring should be required to ensure groundwater supplies have not been contaminated by individual systems built with construction grants. Because individual systems will often be widely scattered and in remote areas, monitoring difficulties and costs could be of large magnitude. The periodic sampling of potable water wells, selected to represent the planning area, is deemed to be a minimum requirement. Careful analysis of the source of contamination is essential since inadequate well construction can be the primary cause. Large concentrations of individual systems which have soil absorption beds will require additional monitoring from existing or test wells, depending on the geology of the area and the location of those aquifers which are, or are likely to become, drinking water sources.

The monitoring program should be planned as part of the facility plan. Criteria for best practicable waste treatment technology, published by EPA under section 304(d)(2) of the Act, shall be met for all individual systems. These discharges shall also comply with State and local requirements for control and abatement of groundwater pollution.

Other important issues which arose follow:

1. Are full construction costs, including major rehabilitation, upgrading, installing and enlarging, grant eligible?

Yes. These functions may meet water pollution control needs in the most economical and effective manner provided the work is properly done and adequate operation and maintenance procedures are arranged.

2. Should this special authority be used to construct septic tanks serving single residences when legislative history contains an indication that this ordinarily should not be done?

Several statements in the legislative history of the 1977 Act lead to the conclusion that septic tanks, with various further treatment and disposal features, are to be considered as individual systems. The optional solution, not to make them grant eligible, would be to eliminate from Federal funding one of the most frequently used and successful devices. "Septic tanks" rarely fail. It is the soil absorption field which fails if not properly designed, constructed, maintained, and operated.

Responses to comments received after issuance of the interim regulations continue below.

Several comments were received that nonprofit and nongovernmental institutional entities, such as churches, schools, hospitals, and charitable organizations, with flows of less than 25,000 gallons per day should be exempt from paying back the Federal share of the cost of construction. The 1977 Act authorizes grants to construct privately-owned treatment works only to serve principal residences and commercial establishments. Nonprofit and nongovernmental institutions are normally not residences and therefore must fall into the "commercial" category or be considered ineligible for grants to build privately-owned treatement works. The 1977 Act requires recoupment of the capital costs of construction from "commercial" users and specifically states that such users are not exempt from the moratorium during the cost recovery study. Some comments were of the opinion that it would be difficult to administer this requirement for very small facilities in very small communities. EPA believes that the one user equivalent (generally 300 gallons per day) exemption will ease the administrative burden by exempting the very small entities from cost recovery. The industrial cost recovery study now underway as required by the 1977 Act will analyze the overall impacts of cost recovery from commercial users which receive grants to construct privately-owned systems.

Comments were received on the desirability of a separate priority list for projects eligible for the 4 percent set-aside. The comments are addressed earlier in this preamble under State priority.

Several comments pointed out the impossibility of forming individual systems management districts where State laws do not exist to permit such public bodies. One commenter asked if the costs of evaluation and changes in State codes were grant eligible. Appropriate legislation has already been enacted by some States without the assistance of grant funds. Generally, legal fees for such purposes are not eligible under the 201 grant; however, some costs of such evaluation may be eligible for grants under sections 106, 205(g), or 208 of the Act. Where such organizations are legally possible, doubt was expressed as to the availability of manpower with expertise to handle such districts. The regulations state that the public body is responsible for operation and maintenance of individual systems and the establishment of a comprehensive program for regulation and inspection of the systems. The work can be performed by contract, by commercial firm on an on-call basis, or by means other than municipal forces if desired.

One comment stated individual systems should be handled as a generic class for step 1 and specifically designed in step 2 because the planning effort required is very demanding compared with the population served. However, individual systems vary widely in design, operation, and cost, and really cannot be treated as one similar generic group. During the facilities planning stage, various types of individual systems should be evaluated for suitability of operation in the physical setting (soils, slope, etc.) and for reliability in meeting the needs of future users; a cost-effectiveness analysis should be completed for each system under consideration. The information from these and other required analyses will range greatly and should be evaluated carefully in the planning stage before determining which system should be designed and constructed.

Many comments were received objecting to the requirement for unlimited access to each individual system at all times for such purposes as inspection, monitoring, construction, maintenance, etc. The regulation has been modified to read "access . . . at all reasonable times."

Comments were received indicating a fear of costly and restrictive monitoring of groundwater programs. Other comments recommended increased monitoring requirements. Still others concurred with the requirements as written. EPA has worded the regulations to allow considerable flexibility in monitoring so that local conditions can dictate the extent of the requirement within limits designed to ensure that minimum monitoring to protect the health of the community is required.

Concern was expressed that best practicable waste treatment criteria were not defined. These criteria are defined in chapter II of "Alternative Waste Management Techniques for Best Practicable Waste Treatment," EPA-430/9-75-013, MCD-13, under alternatives employing land application techniques.

EPA received recommendations that nonprofit organizations be deemed eligible for grants and for management of on-site systems. The Act allows award of grants only to "public bodies." Nonprofit organizations with the capability and authority to plan, design, construct, and operate treatment works for public purposes would be eligible to function in that capacity under agreement with the public body. If the nonprofit organization is constituted a public body under State law, it could qualify for consideration for a grant (e.g., a citizen's association which is officially constituted as a sewer district).

One comment asked what is a "number of individual units," is there a maximum number of individual units, and if there is a dollar ceiling for individual systems. There is no absolute dollar ceiling for individual systems; the law specifically states a minimum of "one or more principal residences or small commercial establishments." The maximum number of units would be established through selection of the appropriate alternative or unconventional technology for individual residences or clusters of residences. Under the definition elsewhere in the regulation (§ 35.915-1(e)), this technology would be applied in communities of 3,500 population or less, or highly dispersed sections of larger communities.

One comment referred to the statement that all individual systems qualify as alternative systems, yet the cost-effectiveness guidelines provision for the 115 percent cost preference for innovative and alternative systems does not apply to individual systems. The law specifically states privately owned individual systems must cost less than the cost of providing a system of collection and central treatment.

Other comments recommended more coordination between EPA and the Farmers' Home Administration (FmHA). Such coordination has already been initiated; FmHA's final decision on projects is often made pending EPA approval of a grant. In addition, coordination between the two agencies in areas such as joint applications, standardization of definitions of high-cost projects, and other streamlining of administrative procedures is proceeding under the aegis of a White House working group on rural water and sewer problems. This coordination also will be extended to other Federal agencies through this group.

One comment recommended extension of grant eligibility to bathroom fixtures and plumbing utilizing flow reduction technology. Congressional intent expressed in the legislative history is quite clear that commodes or associated plumbing are not eligible for grant funding. If eligible, administrative difficulties and costs would be very large.

EPA encourages the use of the facility plan to evaluate every feasible alternative for solution of the water pollution problem whether or not such a solution involves grant ineligible facilities or methods. Assistance in grants packaging, construction supervision, planning and initial training for operations and maintenance are all generally grant eligible.

There were several requests to define terms and concepts more specifically. This will be done in separate guidance to be issued at an early date.

Regulatory changes relating to individual systems are found in §§ 35.905-23, 35.917-1(b), 35.917-2(a), 35.918, 35.918-1, 35.918-2, and 35.918-3.

Cost-Effectiveness Analysis Guidelines and Reserve Capacity

Background. On February 4, 1977, EPA published in the Federal Register proposed guidelines to amend and supplement the Cost-Effectiveness Analysis Guidelines (Appendix A to 40 CFR, Part 35, Subpart E). That proposed revision was intended to provide for cost-effective sizes of and sufficient reserve capacity for wastewater treatment works and, at the same time, to avoid overdesign. Coverage included guidance and alternative procedures for forecasting growth of population, for estimating wastewater flows, for determining cost-effective construction staging periods, and for providing extra capacity beyond that determined to be cost-effective.

Most of the commenters on the proposed revisions, while agreeing in principle with the proposal, raised questions or suggested modifications that convinced the Agency several changes were warranted. Also, additional guidance was required to implement section 16 (Cost-Effectiveness) and section 21 (Reserve Capacity) of the 1977 Clean Water Act. Accordingly, the EPA revised the Cost-Effectiveness Analysis Guidelines to incorporate these changes, and on April 25, 1978, published them as part of a set of interim regulations to implement the Clean Water Act. These interim guidelines were effective as of June 26, 1978. Commenters on the interim guidelines suggested revisions that convinced the Agency to make some additional changes.

Innovative and alternative technologies. Section 16 of the 1977 Act encourages the use of innovative and alternative wastewater treatment technologies by extending grant eligibility to such projects if the life cycle cost does not exceed that of the most cost-effective alternative by more than 15 percent. The Agency's interim guidelines called for using option 3 of the following options for calculating the cost-effectiveness preference:

1. Use the life cycle cost of the entire proposed waste treatment system as a base for calculating the cost difference;

2. Apply the 15 percent increase to innovative and alternative components (and other differing portions) as compared with corresponding portions of the least costly noninnovative alternative; or

Use, as a base, the entire proposed waste treatment system where the system primarily (more than 50 percent of its cost) involves innovative or alternative technologies. Should innovative or alternative components comprise 50 percent or less of the system cost, the calculation base would be that for option 2.

Some commenters have expressed a preference for option 2. The Agency does not concur because option 2 would be difficult to administer and would also restrict unnecessarily the number of projects qualifying for the 15 percent preference. The Agency has rewritten option 3 to state that all projects with alternative and innovative components will qualify for the preference, except for those in which alternative or innovative unit processes replace conventional processes in a treatment plant and account for less than 50 percent of the cost. This language represents a slight liberalization of option 3, allowing some additional projects to qualify for the cost preference. This revision also clarifies and simplifies the old language.

Other commenters noted that collection systems common to both the conventional option and alternative technology system should not be included in the calculation base. The Agency agrees and has modified the guidelines accordingly.

Another commenter noted that the 15 percent cost-effectiveness preference must be mandatory rather than permissive. Both the law and these regulations mandate a 15 percent monetary cost-effectiveness preference for all innovative or alternative projects or components thereof that meet the Agency's criterion for such projects. However, this does not mean that the grantee must adopt an option featuring innovative or alternative technologies wherever their monetary costs are less than the 15 percent ceiling because nonmonetary factors must be taken into account as well.

Discount rate. The Agency considered raising the discount rate for evaluating proposed wastewater treatment works from that used by the Agency (currently 6⅝ percent) to 10 percent. The former rate is used by the Water Resources Council (WRC) to evaluate the costs and benefits of water resources projects. EPA, as a member agency, adopted this rate in 1973 when it published the Cost-Effectiveness Analysis Guidelines (appendix A of Construction Grant Regulations), although the construction grants program is not covered by the WRC "principles and standards" for evaluating water resource projects. The latter rate (10 percent) is cited in Office of Management and Budget (OMB) circular A-94 for use in agency programs not covered by the WRC "principles and standards."

The 10-percent rate is believed to approximate the opportunity cost of capital. The "Opportunity Cost of Capital Concept" has the most theoretical economic justification for cost-effectiveness analysis. This concept suggests the proper discount rate to use for public investment projects should be based on the rate of return to private sector investment (before taxes and adjusted for inflation). This is because resources used for public investment have alternative uses in the production of private commodities which society foregoes for the sake of the public investment.

Use of the 10-percent discount rate would help produce a more economically efficient distribution of construction grant funds. The expected result is that the optimal (cost-effective) staging period (the number of years for which the treatment plant is designed to handle a community's growth in terms of sewerage discharge) will decrease from about 10-20 years to about 9-16 years. These shorter staging periods will result in slightly smaller treatment works and in smaller initial treatment expenditures for each proposed treatment system. This should permit a somewhat greater number of treatment systems to be funded.

Despite these considerations, the Agency has decided against raising the discount rate to 10 percent. The higher discount rate would have the effect of lowering the total present worth cost of facilities with high operation and maintenance costs in comparison with the total present worth cost of capital intensive facilities with low operation and maintenance costs such as land treatment and energy recovery facilities. This could largely offset the 15-percent cost-effectiveness preference given to such measures under the 1977 Act and these guidelines. It would also run counter to the President's recent decision to retain the existing discount rate for water resources projects.

Many commenters representing a wide variety of interests opposed increasing the discount rate (only one favored such action) primarily because such actions would tend to disadvantage capital intensive land treatment and energy recovery alternatives and would favor operation and maintenance cost intensive options.

The Agency has decided to retain the WRC discount rate (currently 6⅝ percent) because this rate is consistent with the President's water resources policy and the net programmatic advantages, if any, of increasing the rate are not of overriding importance.

Cost escalation. Several commenters advocated use of a salvage value for land higher than the prevailing market price as required in the interim guidelines because of the very high rate of land value appreciation. The Agency has analyzed farmland value appreciation since 1960 and since 1970 and has compared these rates with cost escalation rates for construction, energy and labor. The analysis showed that land values over both the 17-year and 7-year periods have escalated roughly 3 percent faster than costs associated with construction or operation and maintenance of a treatment works. On this basis, the final guidelines will require, in the calculation of land salvage value, a land appreciation rate of 3 percent compounded annually, unless the grantee justifies a higher or lower percentage based upon historical differences between local land cost escalation and construction cost escalation. This allowance represents the estimated difference in rates between land cost appreciation and the cost escalation of goods and services related to construction.

Several commenters suggested escalation of energy, chemical, and labor costs in the cost-effectiveness analysis to account for anticipated high increases in these costs. It should be noted that the cost effectiveness analysis procedures call for use of constant dollars based on prevailing market prices at the time of the analysis and a low discount rate which is less than the inflation-free rate based on the opportunity cost of capital concept. This approach, rather than implying no future inflation, simply assumes that the costs of all resources involved in treatment works construction and operation will increase at about the same rate on a long-term basis. The results of the cost-effectiveness analysis would be distorted, however, if the prices of certain resource inputs changed significantly over the planning period in relation to the prices of other resources. The Agency has analyzed historic data on wastewater facility construction price indexes and on prices of various operation and maintenance components, including labor, electricity, chemicals, coal, petroleum distillates, and natural gas. We also reviewed projections of future energy use prepared by the Department of Energy. Only the historic and projected increase in natural gas prices were found to significantly exceed (by nearly 4 percent) those for construction and the average of other operation and maintenance elements. Thus, the Agency has revised the guidelines to require escalation of relative natural gas prices over the planning period at a compound rate of 4 percent annually, unless the grantee justifies a higher or lower percentage based upon regional differentials between historical natural gas price escalation and construction cost escalation.

Reserve capacity. The Clean Water Act requires the Agency, in determining the amount of reserve capacity eligible for a grant, to take into account the projected population presented in a facility plan. The population must be based on the latest information available from the U.S. Department of Commerce or from the States as EPA determines appropriate. The interim guidelines called for population forecasts in facility plans to be based upon disaggregation of State population totals already developed by the Department of Commerce. Several commenters, principally 208 planning agencies, oppose this approach and contend that population forecasting is a policy matter that should best be addressed by local governmental units. Others, principally environmental groups and individuals, favor the disaggregation approach as a means of preventing excessive capacity and resultant secondary impacts.

The Agency believes the disaggregation approach should be retained because, to avoid providing excessive reserve capacity, forecasts of population and economic activities for individual small areas such as facility planning areas or designated 208 areas should be reasonably consistent with State and national projections. This approach is consonant with the President's urban policy intended to revitalize cities and discourage urban sprawl. The guidelines permit inclusion of extra capacity in a treatment works at the expense of the grantee to accommodate local growth policies. The final guidelines allow reasonable departures from the Department of Commerce State projections and their disaggregations to designated 208 areawide planning areas, where the State or designated 208 agency has already prepared projections. The final guidelines permit use of State projections already prepared by the State if the year 2000 State projection does not exceed that of the Department of Commerce projection by more than 5 percent. The Administrator may approve State population projections that exceed the Department of Commerce projections by more than 5 percent if justified by the State. Where a designated 208 agency has already prepared a population projection for its area, it may be used if the year 2000 population does not exceed that of the disaggregation, based on the Department of Commerce projection, by more than 10 percent.

One State suggested allowing a State prepared population forecast to exceed the Bureau of Economic Analysis forecast by 10 percent without justification. The Agency does not concur because the present 5-percent departure is substantial. Also, since the State may increase its total after the 208 agencies have received their variances up to 10 percent, the total final State departure from the Bureau of Economic Analysis projection may already approach 10 percent or even more in some cases. Another State commented that States already having policies of disaggregating State totals among counties, even within designated 208 areas, should be allowed to continue to do so. The Agency agrees and has included such a provision in the final guidelines.

One commenter has suggested that population projections in 201 and 208 plans should no longer be wedded to existing zoning ordinances, which may be exclusionary and forbid immigration by lower income people. Instead he suggested that future population and the resulting reserve capacity for grant funded projects should rely on regional population projections and, in particular, regional allocations of low- and moderate-income apartment units. The Agency cannot fully comply with this suggestion because it believes that zoning and land-use decisions should be left primarily with local governmental units, and decisions on cost-effectiveness should be based on total and not partial population projections in an area. However, these regulations require the local population projections for 201 plans to fall within ceilings based on disaggregation of State and regional population totals.

Several commenters advocate a much more flexible population forecasting approach by permitting use of population projections other than the Bureau of Economic Analysis. The Agency does not concur because use of various projections would be inequitable and would lead in many instances to funding excessive reserve capacity to accommodate growth.

One commenter stated that the population disaggregation approach is too simplistic for interstate metropolitan areas where factors influencing population change go beyond State boundaries. The Agency concedes that such situations may pose difficult forecasting and disaggregation problems. Nevertheless, the Agency believes the interstate disaggregation problems can be worked out through consultations among the concerned States, designated 208 agencies and other regional planning agencies.

Some commenters pointed out the need for public involvement in the review of the State population disaggregations. The Agency agrees that the public should have an opportunity to review and comment on the disaggregation before Agency review. Accordingly, the final guidelines now require the State to hold a public meeting on its disaggregations before submitting them for Agency review.

The Agency believes that the same population projections should be used for both air and water quality planning. Appendix A now requires, as an initial step toward implementing this objective, that States, when disaggregating total State population, consult with organizations of local officials responsible for water quality and air quality planning. In many instances the organizations certified by Governors pursuant to section 174(a) of the Clean Air Act to do air quality planning are also 208 agencies.

Some commenters have objected to the per capita flow limitations of 60-80 gallons per capita per day (the second method of estimating wastewater flows) as being unrealistically low. The Agency believes that such dry weather base flow allowances are adequate for smaller communities where flow data are lacking. These allowances exclude infiltration and inflow. Residential wastewater flows nationwide average only 45 gallons per capita per day. Other commenters favor increasing future per capita flows over time. They contend that increasing per capita flows have been observed during the past 10 years and that with increasing affluence this trend will continue. The Agency agrees that per capita water usage and wastewater flows have increased in the past but believes that this trend is reversing. This can be attributed to the increase of personal water conservation habits encouraged by periodic water shortages or higher water supply and sewerage costs even in normally water rich areas. Moreover, plumbing codes, State laws and ordinances are rapidly being revised in many areas to require installation of water-saving fixtures in new dwellings, hotels, motels, and other buildings.

Section 21 of the 1977 Act requires the Agency, in approving the amount of reserve capacity for a treatment works, to take into account efforts to reduce the flow of sewage and unnecessary water consumption. The President's water resource policy features water conservation as its cornerstone and requires Federal agencies to implement appropriate conservation measures.

The guidelines require a cost-effectiveness evaluation of flow-reduction measures such as plastic toilet dams and low flow showerheads; changes in laws, ordinances, or plumbing codes requiring installation of water-saving devices in future habitations; and water pricing changes. The grantee must develop a recommended flow reduction program featuring a public information program plus cost-effective measures for which the grantee has implementation authority or can obtain cooperation from an entity with such authority. Exempted from these requirements are those communities with a population less than 10,000 or with average daily base flows, excluding infiltration/inflow and industrial flows, for treatment works design of less than 70 gallons per capita per day or with ongoing flow reduction programs.

Several commenters have suggested that small communities should be encouraged to conserve water and thus should not be exempt from the flow reduction requirements. The Agency concedes that some water conservation potential exists for smaller communities even though such communities tend to use and waste less water than the larger, more affluent cities. Nevertheless, the Agency believes that the limited cost savings obtainable in small communities from flow reduction programs may not be commensurate with the administrative burden imposed. Some commenters have pointed out that the 70 gallons per capita per day exemption criterion is too stringent and have suggested a 100 gallons per capita per day criterion. The Agency disagrees because the 70 gallons per capita per day figure, which represents an average dry weather base flow, is large enough to exempt most small communities and water-conserving larger cities. Almost all communities, including larger water users, would be exempt if the suggested 100 gallons per capita per day criterion were used.

Two commenters objected to the flow reduction requirements as being unreasonable for areas with adequate water supplies. The Agency disagrees. During the past 20 years, persistent drought and accompanying water shortages have plagued many supposedly water-rich areas. Moreover, the costs of water management, including water supply withdrawal and treatment, distribution, and, finally, wastewater treatment, are very substantial even in areas with plentiful water. Water conservation can markedly reduce these total water management costs over the long term.

Three commenters objected to the construction staging requirements for treatment plants, particularly noting that the 10-year period is insufficient for planning and designing future expansions in complex metropolitan areas. The Agency believes that construction of treatment facilities should be staged, particularly in high growth areas, to reduce the high construction and operational costs otherwise attributable to large amounts of idle reserve capacity. To achieve this objective, a staging period as short as 10 years does not appear unreasonable for high-growth situations. Another important related consideration is the high local cost burden for treatment facilities, especially for small communities. Limiting the treatment plant size to that reasonably necessary to accommodate future growth helps to reduce this local financial cost burden.

One commenter noted that the tabulated staging periods for small plants of 1 MGD or less capacity could lead to designing a treatment plant serving a high growth rate area for a capacity less than that for a lower growth rate area. The Agency agrees with this observation and has accordingly included in the final guidelines a 15-year staging period for the small plants to preclude this transition problem.

Several commenters objected to the required 20-year staging period for interceptors which can be increased only if justified and in compliance with approved water quality management or other environmental plans. They suggest that sizing a pipe for 40 to 50 years will cost less in the long run and will often decrease primary environmental impacts. The Agency has found that total present worth costs of sizing a pipe for 20 years and adding another pipe 20 years hence are about the same as providing 40 years of pipe capacity initially. The difference in primary environmental impacts will vary. The primary reason for limiting interceptor sizes to 20 years would be to limit the induced growth and resultant secondary environmental impacts related to larger pipes.

Interceptor planning. Two commenters have suggested changing the guidelines to permit extension of interceptors into undeveloped areas (but not environmentally sensitive areas) where consistent with growth management plans. This change would be intended to encourage growth in suitable areas. While this suggestion has some merit, the Agency believes the provisions discouraging interceptor extensions into undeveloped areas should remain unchanged because:

(1) Federal funding of interceptor extensions into undeveloped areas could induce very rapid growth with resultant adverse secondary environmental impacts,

(2) Sewering could be encouraged in cases where other approaches might be more cost-effective, and

(3) The Federal subsidization of new development would mean deferring Federal assistance for correcting existing water pollution problems elsewhere.

Useful life of a treatment works. The former guidelines included unnecessary and confusing distinctions between the definitions of "service life" and "useful life" for treatment works. The new guidelines drop the former service life definitions and amend the useful life definition. This is now simply the estimated period of time during which a treatment works or a component of a waste treatment management system will be operated. Other regulation revisions have been made so that the rest of the regulation is consistent with this change.

These regulatory changes are made in appendix A to subpart E.

GRANT ELIGIBLE CATEGORIES

On June 21, 1977, the Agency issued Program Requirements Memorandum (PRM) 77-8 concerning the review of pending new collector sewer projects. The policy defined in more detail and required rigorous implementation of then existing Agency guidance on eligibility and cost-effectiveness of collector sewer projects. It was intended to insure that the limited construction grant funds available are obligated for collector projects only when needed to correct a problem of public health or ground or surface water pollution. Specifically, that policy restricted grant eligibility of collector sewers to those areas with population densities of at least 1.7 persons per acre (one household for every 2 acres) on October 18, 1972. Population density of those areas was to be evaluated on a block-by-block basis or, where typical city blocks do not exist, by areas of 5 acres or less.

Section 36 of the 1977 Act amends section 211 of FWPCA to preclude use of the population density criterion in PRM 77-8 as a test of grant eligibility for collector sewer projects but permits use of the criterion for evaluating alternatives. The Agency revised the policy of PRM 77-8 accordingly and on March 3, 1978, issued new PRM 78-9 which supersedes PRM 77-8. PRM 78-9 was published in the FEDERAL REGISTER on April 7, 1978 (43 FR 14722). The new PRM retains the one household per 2-acre criterion only for identifying less closely populated areas where individual or other small wastewater treatment systems are likely to be more cost-effective than collector sewers and thus must be evaluated in detail if collector sewers are proposed for such areas. The Agency believes that use of the population density criterion in this manner will assist with and simplify the cost-effectiveness analysis for collector sewer projects.

These final regulations require, as a basis for eligibility, new collector sewer projects serve a community in existence on October 18, 1978, and define a community as including any area with substantial human habitation on October 18, 1972. Also required, consistent with PRM 78-9, is a block-by-block evaluation to identify areas with substantial human habitation on October 18, 1972. The proposed collection system must be cost-effective and the population density of the area to be served must be considered in determining the cost-effectiveness of the project. In addition, the proposed collection system must conform with approved 208 plans, applicable environmental laws, executive orders on wetlands and flood plains, and Agency policy on wetlands and prime agricultural lands.

Two commenters questioned use of a block-by-block evaluation to identify human habitations existing as of October 1972 as a test of grant eligibility and suggested that the existence of a community at that time is sufficient to pass the eligibility test. The Agency disagrees because Congress clearly intended to prohibit grant funding of collector sewers to serve new developments. The block-by-block evaluation is necessary for identifying new developments, principally in community fringe areas, that should not receive Federal grant assistance for collector sewers. One commenter suggested addition of a provision requiring use of grant conditions such as restrictions of sewer hookups where necessary to protect environmentally sensitive areas and prime agricultural lands from new development. The Agency, noting that this suggestion conforms with existing Agency guidance, has added the suggested provision to the final regulations.

Section 36 of the 1977 Act further amended section 211 of the FWPCA to prohibit the use of authorized construction grant funds for control of pollutants from separate storm sewers.

Regulatory provisions relating to grant eligible categories are in §§ 35.905-23, 35.925-13, and 35.925-21.

LAND ELIGIBILITY

Section 37 of the 1977 Act amends the definition of "treatment works" under section 212(2)(A) of the FWPCA to include as eligible, under site acquisition of land that will be an integral part of the treatment process, the land used for the storage of treated wastewater in land treatment systems prior to land application. EPA has interpreted this provision to permit acquisition of land for composting sludge since such composting can be part of a treatment process. In order to implement this amendment, § 35.905-23 has been revised to include in the definition of "treatment works," the land used for composting of sludge and for the temporary storage of treated wastewater in land treatment systems. Section 35.940-3 has also been revised to include, among costs allowable if approved by the Regional Administrator, the land used for composting of sludges and for the temporary storage of treated wastewater in land treatment systems prior to land application.

Construction grants regulations promulgated on February 23, 1973, and February 11, 1974, are applicable to construction grants awarded between October 18, 1972, and December 27, 1977. The revised definition of treatment works made pursuant to the 1977 Act is applicable to all projects for which Agency approval of step 1 facility plans had not been given before December 27, 1977.

The Agency received comments supporting and opposing the eligibility of land for composting of sludge. The final regulations retain the eligibility because, by encouraging composting, it furthers the clear congressional intent to promote beneficial use of sludges on the land. Composting of sludge and storage of treated effluent are both critical stages immediately prior to land application. Land eligibility provides a very similar incentive for comparable situations.

Changes to the regulations implementing this amendment are made in §§ 35.905-23 and 35.940-3.

RECREATIONAL USE

Section 201(g)(6) requires that no wastewater treatment facilities grants be made after September 30, 1978, unless the grant applicant has satisfactorily demonstrated to the Administrator that potential recreation and open space opportunities have been analyzed in the planning of the proposed treatment works. This provision provides an opportunity for communities to obtain important recreational and open space benefits at relatively little extra cost.

Commenters generally addressed two questions. Should the analysis be required for all projects for which grants are made after September 30, 1978, or only for projects for which facility planning begins after that date? Should construction grants funds under steps 2 and 3 be used to design and build recreational facilities? Environmental, parks, and recreation groups argued that the analysis should be required of new and ongoing projects and that some funding for recreational use facilities should be available under steps 2 and 3. Other commenters argued to the contrary. Some pointed out that not all projects lend themselves to meaningful analyses of recreational use opportunities. Others indicated that recreational use considerations are beyond the scope of the water quality objectives of the program.

One overriding intention of Congress, often expressed in the legislative history of the 1977 Act, was that new planning requirements not delay ongoing projects needed to meet water quality objectives. Consequently, the recreational use analysis will be required only of new facility plans initiated after September 30, 1978. Nonetheless, EPA encourages planning for recreational and open space opportunities associated with treatment works. Grantees with ongoing projects are free to request grant amendments for extra money to carry out such recreational planning. EPA will look favorably upon such requests if they do not delay projects or raise costs significantly.

Section 201(g)(6) requires an analysis of potential recreation and open space opportunities in the planning of wastewater treatment facilities. It does not require nor authorize the funding of the design or construction of such recreational facilities. Such costs are not grant eligible under steps 2 and 3. EPA has already taken measures to prepare program guidance in coordination with the Heritage Conservation and Recreation Service and in consultation with park associations to implement this provision. We intend to aid grantees as much as possible to avail themselves of funding for recreation and open space design and construction from other sources.

The Heritage Conservation and Recreation Service recommended that the required analysis specifically mention access to water inasmuch as that is viewed as the key to deriving recreational benefits in this context. The final regulation reflects this recommendation.

The question of how recreational use and other nonwater quality considerations will be considered in cost-effectiveness guidelines will be dealt with in program guidance. In general, such factors come into play when choosing between two otherwise closely matched alternatives.

It was also suggested that the proposed portion of the facility plan describing measures taken to inform the public of potential recreation and open space opportunities be deleted and that this topic be included in the general public participation requirements. The Agency agrees with this approach and the extra requirement has been dropped.

Pertinent regulatory changes have been made in § 35.917-1(j).

COMBINED GRANTS (STEP 2+3)

Under new provisions added to section 203(a) of the FWPCA by section 18 of the 1977 Act, a single grant may be awarded for the combined Federal share of the cost of step 2 (preparation of plans and specifications) and step 3 (actual construction) for communities of 25,000 or less population if the total estimated step 3 cost of the treatment works is $2 million or less—$3 million in States with unusually high construction costs. At the present time, Alaska, California, Hawaii, Illinois, Minnesota, and New York are designated as having high construction costs. Based upon needs survey standard cost curves, costs in these States were determined to be more than one standard deviation from the norm.

EPA awarded step 2+3 grants in the past, but in 1974 the General Accounting Office ruled that they were not allowed under the existing statute. In allowing this new procedure, Congress intends to accelerate the grant process. By providing limited relief from the step 1-2-3 process to small communities, the paperwork and attendant delays incurred by separate grant applications will be minimized. Ultimately, the completion time and costs for these projects should be greatly reduced. It is necessary, however, to balance the intent to streamline these smaller projects with the minimum control necessary to assure that an acceptable pollution abatement facility is built. Plans and specification approval prior to advertising for bids on step 3 construction is necessary for this purpose.

Formal comments on the step 2+3 construction grants regulations were received from a number of organizations.

One comment suggested that since existing State project priority lists were developed without the knowledge that step 2+3 grants were possible, that portion of the regulation requiring a step 2+3 project to appear on the approved priority list should be delayed to take effect for the priority list for fiscal year 1979 (FY 1979). The Agency made this provision effective upon publication of these regulations as interim final to allow States the opportunity to amend their FY 1978 priority lists if they chose. The provision is intended to require that step 2+3 projects appear on the priority list beginning with FY 1979.

Another comment suggested that the regulations use service area population rather than the population of the applicant municipality as the criterion for determining eligibility for a step 2+3 grant. The concern was that a regional authority or grantee serving more than one municipality may exceed the 25,000 population criterion though the service area population was less than 25,000. The regulations as written use the term, "applicant municipality," as stated in the statute. Congress provided the opportunity for step 2+3 grants to applicants with limited administrative capability. The population within the jurisdiction of the applicant municipality is thought to be a better indicator of an applicant's likely administrative capability than the service area population, which could be more or less than that which is within the applicant's jurisdiction.

Another comment concerned the Agency's criterion for determining areas of high construction cost. The standard deviation was selected as a commonly used and appropriate statistical device. As mentioned above, based upon needs survey standard cost curves, six States were determined to be more than one standard deviation from the norm. (Alaska and Hawaii were two States mentioned by the congressional conferees as having high construction costs.)

A comment from a State agency suggested that the regulations should require a comparison of the cost estimates after step 2 design with those presented in the facility plan. The objective of such comparison would be the elimination of "gold-plating" which escalates project costs above those presented in the facility plan. Since plans and specifications must be reviewed for conformity with the facility plan and approved prior to commencement of step 3 work, the necessary authority and checkpoint already exist. No modification of the step 2+3 regulation was necessary.

The last portion of § 35.909(a), stating that an existing step 2 grant could be amended to change it to a step 2+3 grant, has been deleted and paragraph (b)(3) of that section has been amended. It was included in the interim regulations to supersede Program Requirements Memorandum (PRM) 78-7, which was to be effective prior to promulgation of these final regulations and prohibited amendment of existing step 2 grants for purposes of converting to a step 2+3 grant. Since that PRM is no longer effective, specific reference to allowing such amendment is no longer necessary in the regulation.

Regulatory changes on combined grants are found in §§ 35.903(b), 35.909, 35.920-3(d), and 35.930-1(a)(4). §§ 35.930-1(a)(5), 35.935-4, and 35.935-9 were deleted.

PRETREATMENT

Regulations implementing a comprehensive pretreatment program were promulgated as 40 CFR Part 403 on June 26, 1978 (43 CFR 27736). These regulations relate the construction grants program to the pretreatment program. They are intended to (1) establish pretreatment program development as a grant eligible item, (2) allow funding to be accomplished by amendment of a step 1, 2, or 3 grant whichever is most appropriate to the circumstances, (3) insure uniform development of the pretreatment program by requiring that certain elements be completed before the award of a step 2 grant, and other elements to be completed prior to award of a step 3 grant, (4) withhold grant payment at the 90 percent point in step 3 if the pretreatment program is not approved by that time, and (5) provide for time phasing that insures attainment of environmental benefits of the pretreatment program without severe disruption to the construction grants program.

Many municipalities have already developed or are in the process of developing pretreatment programs either on their own initiative or in response to national pollutant discharge elimination system permit requirements. We do not intend that such work be duplicated. To the extent that previous work meets the requirements of an approvable pretreatment program under part 403, it is to be incorporated in the program development under these construction grants regulations. To the degree that additional work must be done to complete the requirements of an approvable program, it may be grant eligible. Work done prior to the effective date of the final regulations is not grant eligible.

We received a number of formal comments on the proposed construction grants pretreatment regulations. The comments fall into the basic areas discussed below.

A number of commenters expressed concern that § 35.907(e) of the proposed regulations would not allow as eligible costs studies to determine pollutant removals and tolerance of municipal treatment works. We modified these regulations to clarify the funding eligibility of these studies. Currently such studies are grant eligible when performed for the purpose of properly designing the municipal treatment works and will continue to be grant eligible for such purposes. However, when these studies are performed solely for the purpose of the municipalities seeking allowances for removal of pollutants under part 403 of this chapter, they are not grant eligible.

Other comments requested clarification of the construction grants pretreatment strategy and indicated the need for a clearer statement. The general pretreatment regulations published under part 403 of this chapter on June 26, 1978, contain a comprehensive statement of the Agency's overall pretreatment strategy. The construction grants component is summarized as follows. Section 35.907 of these regulations provides that an existing or pending step 1, 2, or 3 grant may be modified to provide for development of a municipal pretreatment program where such a program has not been provided for in a water quality management plan under section 208 of the Act. The purpose of amending an existing or pending grant is (1) to recognize that a large proportion of the total number of step 1 grants expected to be made in this program have already been awarded, and (2) to insure development of an approvable pretreatment program at the earliest possible date. Municipalities that have not yet entered the grant process will be required to develop a pretreatment program as part of the scope of their step 1 grants.

In order to prevent disruption or delay in the movement of a project from step 1 to step 2, or from step 2 to step 3 because of pretreatment requirements, these regulations allow submission of the scope of work under the original or unamended grant upon its completion independent of the status of the work to be completed under the pretreatment grant amendment. To illustrate, if an active step 1 grant at the 90 percent completion point was modified in December 1978, to provide for development of a pretreatment program, the grantee may upon completion of the final 10 percent of the original scope of work, submit that work together with a step 2 application and the step 2 could be awarded at any time prior to June 30, 1980, without any of the elements of the pretreatment work being submitted. In order for the step 2 grant to be awarded after June 30, 1980, however, the grantee must have completed and submitted the elements of the pretreatment program specified in § 35.920-3(b)(9). The situation would be similar in going from step 2 to step 3 except that in order to receive a step 3 grant after December 31, 1980, all required elements of the pretreatment program must have been submitted. The process described above provides phase-in for development of pretreatment program requirements in the construction grants program since portions of the pretreatment program must be developed during each step of the grant process to be able to meet application requirements for the subsequent step grant. It also serves to insure continuous development of a pretreatment program.

Section 35.935-19 requires that step 3 grant payments be withheld at the 90 percent point unless the pretreatment program is approved. This provision is intended to ensure that the grantee complies with the terms of the grant agreement.

One commenter objected to the required use of the user charge system in implementing an approved pretreatment program. The regulations do not require use of the user charge system if the grantee chooses to provide other funds sufficient to implement the pretreatment program.

One commenter disagreed with the position expressed in the preamble to the proposed regulations that work done on pretreatment program development prior to the effective date of these final regulations shall not be grant eligible or reimbursable. A statement of ineligibility is found on page VII-6 of the EPA Handbook of Procedures which states that costs normally associated with functions of Government are not grant eligible. The development of regulations or ordinances are specifically cited as such unallowable costs. In addition, the proposed pretreatment regulations published in the FEDERAL REGISTER on February 2, 1977, stated that grant funding of the development of municipal pretreatment programs was a new provision of those proposed regulations. Those written statements of eligibility reflect the Agency policy with respect to funding eligibility for work done prior to these regulations becoming final.

Comments were received requesting that costs of sampling and analysis associated with the industrial survey required under § 35.907(d)(1) be disallowed. There was concern that such costs would be extremely high and therefore take funds needed for construction of treatment facilities. Other comments indicated Federal participation in such costs is essential if effective pretreatment programs are to be developed. These final regulations reflect both concerns by adding new paragraphs (f) to §§ 35.907 and 35.940-3 which provide funds for limited sampling when prior written approval is granted by the Regional Administrator.

A comment was received concerning the need for guidance on the exact nature of the program expected to be developed by grantees. A three volume document entitled "Federal Guidelines: State and Local Pretreatment Programs" was published under section 304(f) of Pub. L. 92-500. This document should still be of assistance although it will be updated to take into account the pretreatment regulations issued as part 403 as well as these final grant regulations.

In order to provide adequate time for the States to modify their priority systems and lists, to provide funding for the pretreatment programs required under these regulations, and to allow for development and distribution of additional guidance on pretreatment program requirements, § 35.920-3 of the proposed regulations has been modified to allow an additional 6 months for submission of the required pretreatment program elements in support of a step 2 or step 3 application. Similarly, the date contained in § 35.935-19 was amended by adding 6 months to the proposed date which marks the 90 percent hold on step 3 grants awarded after that date.

Regulatory changes on pretreatment have been made in §§ 35.907, 35.915-1, 35.917-1(k), 35.920-3 (b) and (c), 35.929-2, 35.935-19, 35.940-1, 35.940-2, and 35.940-3.

INDUSTRIAL COST RECOVERY

Section 24 of the 1977 Act amends section 204(b) of the FWPCA to authorize the Administrator to exempt from the industrial cost recovery (ICR) requirement any industrial user which discharges the equivalent of 25,000 gallons per day or less of domestic sanitary waste. Section 24 permits grantees to develop ICR systems on a systemwide, rather than on a project-by-project basis. It also permits a portion of the ICR revenues retained by the grantee to be used for the administration of the ICR system and maintains the current authority to establish a fund for future expansion or reconstruction of the grantee's treatment works.

Section 75 of the 1977 Act directs the Administrator to conduct a study on the efficiency of and the need for ICR and to report on the study to assist Congress to take action on the future course of ICR. This study is not addressed in these regulations. However, during the period of the study, and ending 18 months after enactment of the statute (June 30, 1979), EPA may not enforce the collection of ICR payments. This is known as the "moratorium" period. At the end of the moratorium, if Congress has not acted, the requirement to make payments of ICR attributed to this period will come back into force. Any ICR obligations incurred during the moratorium will become immediately due, but payments of these obligations may be paid in a lump sum within 1 year or spread out over the remaining ICR period. PRM 78-6 on this subject was issued February 17, 1978, and published in the FEDERAL REGISTER on April 7, 1978 (43 FR 14722).

This section implements the legislative history of section 24 of the Act which indicates that grantees must continue to develop ICR systems during the moratorium; only ICR payments are suspended.

Section 14 of the 1977 Act, which authorizes funding of individual systems (discussed above), requires payment by commercial users of the Federal share of construction costs. We have included this aspect of the individual system amendment in the ICR regulations.

In implementing these amendments in the regulations, we have made the following changes to the regulations promulgated on February 11, 1974. The definition of industrial user in § 35.905 has been revised to include the following: (a) A nongovernmental, nonresidential user which discharges more than the equivalent of 25,000 gallons per day of sanitary waste and which is identified in the Standard Industrial Classification Manual under divisions A, B, D, E, and I; (b) a user which discharges any wastewater containing toxic pollutants or which has any other adverse effect on the treatment works; and (c) a commercial user of an individual system.

The series of sections in § 35.928 have been revised where necessary to incorporate requirements of the 1977 Act such as those relating to systemwide ICR, payments from commercial users of individual systems, and the moratorium. The regulations do not provide for the collection of ICR during the moratorium from industrial users, although grantees may collect ICR payments from industrial users during the moratorium if they so desire. Neither the moratorium nor the 25,000 gallons per day exemption applies to commercial users of individual systems as defined in § 35.918(a)(3) of the regulations.

The grant condition requiring grantee development of an ICR system, a schedule for compliance with the condition, and sanctions for noncompliance are found in a new § 35.935-15. The schedule closely tracks the user charge system schedule discussed above. After the effective date of these regulations, payments under the grant being held for noncompliance with the ICR requirements will be released until the end of the moratorium. (This does not authorize release of payments being withheld for other reasons such as lack of an approvable user charge system). After June 30, 1979, no step 3 grant will be awarded unless the grantee's ICR system has been approved.

The important comments received on the interim regulations and the EPA response are summarized below:

1. The definition of industrial user in § 35.905 should be changed to exclude residential users or all dischargers of sanitary wastes. Preferably, the regulations should use the definition in effect in the construction grant regulations published in 1974.

In the interim regulations, we defined industrial user in part to include all users with discharges into publicly-owned treatment works of more than 25,000 gallons per day of sanitary waste or its equivalent in process waste or combined sanitary and process waste. This interpretation of the 25,000 gallons per day exemption emphasized the volume and character of waste rather than the type of user. We recognize that Congress intended for the 25,000 gallons per day exemption to reduce administrative burdens on grantees. The definition in the interim regulations would have involved less adminstrative efforts than that required under the prior definition. However, it required more administration than if the prior definition were used with the addition of the 25,000 gallons per day exemption. Also, it would have made some large commercial and residential users subject to ICR for the first time.

We have decided not to adopt the industrial user definition published in the interim regulations. Instead, we will use the prior definition with certain modifications. Industrial users are nongovernmental, nonresidential users of publicly-owned treatment works that are identified in Standard Industrial Classification Divisions A, B, D, E, and I, and that discharge more than the equivalent of 25,000 gallons per day of sanitary waste. We have added an explanation of wastes equivalent to sanitary waste. A user's domestic wastes or discharges from sanitary conveniences may be excluded before applying the 25,000 gallons per day exemption. For example, a user that discharges 6,000 gallons of process waste and 20,000 gallons of sanitary waste would not be subject to industrial cost recovery if the grantee elects to allow sanitary wastes to be excluded and the 6,000 gallons of process waste was less than the equivalent of 25,000 gallons of domestic waste.

The term "nongovernmental" as used in the definition of industrial user is to be interpreted consistently with the discussion of publicly-owned facilities in § 35.929-1(b)(4)(iii) regarding approval of user charge systems. An exception is that publicly-owned facilities which discharge nonsanitary waste, such as hospitals, would be subject to user charges but not to ICR. Industrial cost recovery was designed to collect funds from the private sector. It would therefore be inconsistent to require a publicly-owned facility used for public purposes to pay money back to the public treasury. Assessment of user charges for large governmental users with other than sanitary wastes, however, will create a strong incentive to conserve water and reduce waste water flows, thereby reducing treatment and sludge handling costs.

This definition will keep the administrative burden on grantees at a minimum. It does not expand the applicability of ICR payments. It interprets the statute strictly and essentially makes minimal changes in the ICR program until the end of the 18 month moratorium on collection of ICR payments. By that time, the congressionally mandated study of ICR will be complete. The report will address the various options considered by EPA for the industrial user definitions. The Agency will publish as a notice document in the FEDERAL REGISTER the interim recommendations of the report and receive comments before the report is made final and presented to Congress. With the report providing substantive information on ICR systems, Congress can determine whether changes are needed and what they should be.

Two other parts of the industrial user definition in the interim regulations are now promulgated substantially as they were previously published. Industrial users include nongovernmental users that discharge toxic or other pollutants that contaminate sludge, interfere with treatment processes, or create a hazard to people or animals. We added a reference to the contamination of sludge in this part of the definition. Industrial users also include all commercial users of individual systems built with grants under section 201(h) of the Act.

2. Grantees having awarded step 3 grants as of April 25, 1978, but not an approved ICR system, should be allowed to develop an ICR system using either the old or new definition of industrial user.

Several comments expressed the concern that it would be unfair and burdensome to require grantees who already were developing an ICR system under a step 3 grant prior to April 25, 1978, to follow the new definition of industrial users published in the interim regulations on April 25. Accordingly, § 35.928(b) has been revised to allow grantees awarded step 3 grants under regulations promulgated on February 11, 1974, the option to use either the old or new definition of industrial user in developing their ICR system. If the grantee chooses to use the 25,000 gallons per day exemption then it must incorporate all aspects of the new definition of industrial user into the ICR system.

3. The grantee must submit rates to the Regional Administrator in order to obtain approval on an ICR system as specified in § 35.935-15 (b) and (c). These rates cannot be developed until construction is completed, yet under the interim regulations they are required prior to step 3 grant award.

The concern has been raised that grantees would have to develop a speculative rate schedule in order to gain approval for step 3 grants but would then have to develop a more accurate rate schedule when construction is completed and the facilities are placed in operation. EPA has answered this concern by revising the regulation so that grant approval is not contingent upon ICR rate approval.

4. A grantee must calculate ICR on an industry-by-industry basis even if it will implement a systemwide ICR program. The question was raised whether EPA requires a grantee that collects ICR funds systemwide to calculate the revenue which would be received on an industry-by-industry basis for each project within that system.

EPA does not intend for this to be done. EPA wants to insure that the total moneys collected from a systemwide ICR program would neither exceed nor fall short of the funds that would be collected on a project-by-project basis. This does not necessitate an industry-by-industry calculation, nor does EPA require that the rate structure be calculated on a project-by-project basis when a systemwide ICR program is used. We revised § 35.928-1(g) to clarify this misunderstanding.

5. The wording in § 35.928-1(i) concerning inconsistent agreements places the grantee in an untenable legal position because the grantee would renege on existing contracts.

See comment 3 under the user charge system discussion in this preamble.

6. The requirements concerning the use of ICR payments unnecessarily deprive the grantees of flexibility in the use of these payments.

Several comments suggested that the incremental cost of administration should be paid first from ICR revenues before distribution of the remaining funds. EPA has accepted a modified version of this suggestion by revising § 35.928-2(a)(2) to allow grantees to use funds from their 50 percent retained share for the incremental cost of ICR administration before further dividing their 50 percent share to be used for the other purposes specified in the regulation.

7. The requirement that step 1 costs be recovered through ICR is new and unwarranted.

A few commenters urged us to delete the requirement in § 35.928-1(a) that industrial users pay their share of the step 1 grant over the recovery period. This requirement is not new and represents no change in policy. This policy is set forth in Federal guidelines, industrial cost recovery systems (MCD-45). Therefore, EPA disagrees with this comment and will not alter the requirement.

Regulatory sections affected by the ICR amendments are §§ 35.905-6, 35.905-8, 35.928, 35.928-1, 35.928-2, 35.928-3, 35.928-4, and 35.935-15.

USER CHARGES

Section 22 of the 1977 Act amended the user charge requirements in section 204(b) of the FWPCA. This amendment permits grantees to use dedicated ad valorem tax systems for the collection of operation and maintenance costs if a portion of the grantee's ad valorem taxes was dedicated for such use on December 27, 1977, and if the grantee's system results in the distribution of operation and maintenance costs proportionally among user classes. Where an ad valorem tax system is used to collect user charges, users other than residential and small nonresidential users must pay charges based upon actual use.

To implement this amendment we have made the following changes to the regulations promulgated on February 11, 1974:

The definition of user charge in § 35.905 has been revised to include as a user charge that portion of the ad valorem taxes paid by a user for his share of the cost of operation and maintenance.

A new series of sections have been added in § 35.929 which describe the requirements for acceptable user charge systems, whether based on actual use or ad valorem taxes. (Similar requirements in the previous regulations were found in § 35.935-13.) There are no substantial changes to the requirements for user charge systems based on actual use.

The requirements for a user charge system based on ad valorem taxes include five criteria for evaluating an ad valorem tax system to determine if it meets the statutory requirements of being "dedicated" on December 27, 1977.

The regulations require, in accordance with the statute, that operation and maintenance costs be distributed proportionally among the classes of users, even though ad valorem taxes may be used to collect the charge within the residential user and small nonresidential user class. Each member of the industrial and large commercial user class must pay its share of the costs of operation and maintenance based on actual use, but ad valorem taxes may be used to collect all or part of these user charges based on actual use.

In accordance with the statute, the regulations require that each user be notified at least annually of the portion of the ad valorem taxes attributable to wastewater treatment services. The regulations apply this same requirement to user charge systems based on actual use. A grantee which has obtained approval of a user charge system based on actual use may not now substitute a system based on ad valorem taxes.

The grant condition requiring grantee development of a user charge system, a schedule for compliance with the condition, and sanctions for noncompliance continue to be found in § 35.935-13. This section provides that grants awarded under the previously promulgated regulations will continue to be administered under those regulations unless the grantee proceeds to develop a user charge system based on ad valorem taxes under the new law and these regulations. If the grantee does wish to do so, it must demonstrate by July 24, 1978, that its ad valorem tax system was dedicated on December 27, 1977. If it was, any payments being held under the old regulations will be released (in accordance with the legislative history of this provision), but it must complete the user charge system and submit it to the Regional Administrator in time for approval before July 1, 1979. Failure to comply with this requirement will result in cessation of all payments under the grant, possible termination or annulment of the grant, and no new grant awards.

For grants awarded after the effective date of these regulations, grantees must obtain approval of their user charge systems (whether based on actual use or ad valorem taxes) by June 30, 1979, or similar sanctions will apply. After that date, no step 3 grant will be awarded unless the grantee's user charge system has been approved.

The important comments received on the interim regulations and the EPA response are summarized below:

1. The requirement for an annual review of the operation and maintenance charges of a user charge system is too burdensome on the grantee.

EPA agrees with the comments that such a requirement may prove financially, administratively and politically burdensome on grantees. Therefore, we have revised § 35.929-2 to require a biennial review, although we would prefer a more frequent review if possible.

2. The notification requirement of § 35.929-2(f) would impose a very difficult burden on the grantee.

We received several comments criticizing this requirement. One series of comments urged EPA to require notification only through newspapers. This approach would not adequately satisfy the congressional intent that each taxpayer be informed individually of the amount paid for wastewater treatment services. Another series of comments pointed out that a grantee may not have the power to compel tax officials to alter bills as required by this section. EPA agrees and has revised § 35.929-2(f) to permit a grantee, if it so desires, to send out its own notices coincident with the mailing of tax bills by another governmental unit.

3. The wording in §35.929-2(g) concerning inconsistent agreements places the grantee in an untenable legal position because the grantee would renege on existing contracts.

The case law is clear that a grantee's obligation to follow requirements emanating from Federal legislation takes precedence over relevant contractual obligations they may have if the two obligations are inconsistent. This regulation states EPA's previous policy concerning inconsistent agreements which has been applied to all construction grants recipients since promulgation of original user charge and industrial cost recovery regulations on February 11, 1974. The question of whether a grantee would be released from liability for inconsistent contractual obligations is a complex legal issue for which EPA is preparing guidance. In addition, if a grantee is sued under an inconsistent agreement, the grantee may request technical and legal assistance from EPA.

In order to clarify this issue, we have made a minor change in this section. In the phrase "the user charge system shall disregard any terms or conditions," the term "shall disregard" has been replaced with the words "takes precedence over."

4. The schedule requiring the submittal and approval of user charge systems is too burdensome on grantees.

Several comments have been received to the effect that EPA should not make grant awards contingent upon the submittal and approval of user charge systems, and the EPA should extend the deadline past June 30, 1979, for user charge system approval. The legislative history speaks of 1 year after enactment, but EPA has determined that as a practical matter, it is necessary to allow about 1 year after the effective date of the regulations. The June 30, 1979, date also coincides with the end of the 18-month moratorium period for the payment of industrial cost recovery.

5. If public schools are exempt from paying user charges, private schools should also be exempt.

Public schools are exempt if the grantee adopts a user charge system based on ad valorem taxes. Since they are "publicly owned facilities performing local governmental functions" supported almost entirely by general tax revenues, and generally discharge only sanitary wastes, they are distinguish-able from private schools, which are funded privately, or other public facilities, such as hospitals, which receive part of their income from private users or discharge other than solely domestic wastes. In order to minimize administration of accounting for the user charges due from publicly owned facilities performing local governmental functions, the regulations do not require the grantee to bill itself for user charges.

6. Clarify the submissions required and dates to obtain approval of dedicated ad valorem systems as user charge systems.

All ad valorem systems must have been dedicated on December 27, 1977, in order to be approved. To be considered dedicated, the systems must comply with the criteria in § 35.929-1(b). Grantees fall into three categories. Those with step 3 grants awarded after February 10, 1974, and before April 25, 1978, must have submitted evidence of compliance with the first three criteria in § 35.929-1(b) by July 24, 1978. Subsequently they must meet the remainder of the criteria to obtain approval. The July 24, 1978, deadline only constrains grantees in this category. Grantees with step 3 grants awarded after April 24, 1978, and before July 1, 1979, must submit evidence of compliance with all of the criteria in § 35.929-1(b) in time to obtain approval before July 1, 1979. Grantees with step 3 grants awarded after June 30, 1979, must submit evidence of compliance with all of the criteria in § 35.929-1(b) in order to obtain approval before award of the step 3 grant.

7. The requirements to show that an ad valorem system is dedicated are redundant and overly complex.

EPA disagrees with this comment. These criteria are distinct and are the minimum needed to demonstrate that an ad valorem system is dedicated. No commenter has put forth recommendations on how these criteria could be stated more clearly.

Regulatory sections affected by the user charge amendments are §§ 35.905-28, 35.929, 35.929-1, 35.929-2, 35.929-3, and 35.935-13.

Requirements for American Materials (Buy American)

Section 39 of the 1977 Act amended the FWPCA by adding a new section 215 which provides that no grant (interpreted to mean step 3 grant) for which application is received by the Regional Administrator after February 1, 1978, shall be made unless preference is given to the use of domestic construction materials in the construction of the wastewater treatment works.

A new paragraph (d) is being added to § 35.936-13 (specifications) which requires that bidding documents and construction contracts for affected projects include a Buy America provision which requires use of domestic construction material in preference to foreign construction material. (Definitions of these terms are provided.) The regulations also establish those circumstances under which the Agency may waive the provision. Domestic construction material may be given preference if the domestic material is priced no more than 6 percent higher than the bid or offered price of foreign materials. In determining whether to waive the Buy American provision, the Regional Administrator will generally use the "protest" procedures of § 35.939.

Appendix C-2 to subpart E is also amended by adding a new clause which implements the Buy American provision in construction contracts.

Comments received on the Buy American provision indicate that the final regulations for this requirement should be the same as the interim regulations published on April 25, 1978. These regulations follow the regulations of the Buy American Act of 1933 which EPA was instructed by the Congress to observe where applicable. They have the advantage of being relatively simple. Some commenters wished for additional guidance on the application of this provision. Appropriate procedures of other Federal agencies will serve to fulfill this need until initial experience provides the basis for specific EPA guidance. Some commenters suggested that a separate protest procedure for those adversely affected should be adopted; however, the designated protest procedures will resolve Buy American and other issues more expeditiously than other remedies or procedures that are available. Some commenters suggested inclusion of additional preference requirements which are contained in the Buy American provisions of some direct procurement agencies. However, most such provisions have a statutory basis other than the Buy American Act of 1933. Since EPA's statutory authority is limited to Buy American, inclusion of these provisions would not be appropriate, especially since the EPA program is a grant rather than direct procurement program. Regulatory changes on Buy American use are made in §§ 35.936-13, 35-938-9, 35-939(j) and appendix C-2, clause 17.

Local Assistance

The 1977 Act authorizes EPA to provide technical and legal assistance to grantees in the enforcement and administration of grantees' contracts related to EPA-funded wastewater treatment works.

Several commenters suggested that EPA could intervene in civil actions involving a grantee's contracts only when requested by the grantee. We have revised the regulatory language in § 35.970 to track more closely the statutory language of section 203(e) so that both assistance and intervention under this section occur only at the grantee's request. While this may be true for most civil actions which arise involving contracts in connection with federally assisted treatment works, EPA has existing authority through the U.S. Department of Justice to intervene on behalf of the Federal Government in civil actions when a Federal question arises. In revising the language we have also deleted from the regulation reference to the requirement for the Office of General Counsel's concurrence in EPA's intervention in civil actions since this involves internal EPA procedures and would occur in the normal course of events.

Two States suggested that the provision of legal assistance as well as technical assistance should be delegable to States under State management assistance grants. To the extent such assistance is for the administration of contractual matters, this is correct and the regulation has been revised to reflect this change. However, in accordance with section 205(g) of the Act, State management assistance grants are limited to administrative functions and do not extend to areas of contract enforcement or intervention in civil actions involving such contracts. Further, while States may be empowered to provide legal assistance to municipalities, to the extent that such assistance would involve representation in the Federal Court, only the U.S. Department of Justice is authorized to represent the Federal interests in such proceedings.

Questions were raised regarding the provision of assistance under this authority to grantees with projects funded prior to the implementation of this provision. The statute and legislative history of the provision do not set time limits on it. Accordingly, such assistance will be provided whenever considered appropriate to accomplish the intent of the Act without regard to the date of grant award.

The suggestion was made that funds spent as a result of this authority should be deducted from the construction grants allotments of the State in which the grantee is located and that a contractor should be reimbursed by EPA for costs incurred in resolving a dispute if the matter is resolved in the contractor's favor. Assistance and intervention under this authority will normally be provided by Federal personnel and as such will be funded out of operating budgets. To the extent that States would provide contract assistance under State management assistance grants, those funds would come from the State management assistance grants which are deducted from the State allotment. EPA does not have the authority to reimburse contractors for their costs of conducting successful litigation of contract disputes with grantees even if EPA is involved in the dispute.

One commenter suggested that the reference in the regulation permitting oral requests for assistance under this authority in emergency situations is unnecessary. It is our position that since written requests for assistance were mentioned in the regulation as the proper means of requesting assistance, it is also appropriate to mention that oral requests will be accepted on an emergency basis.

Regulatory changes on contract enforcement have been made in §§ 35.936-5, 35.936-8 and by adding a new § 35.970.

TRAINING GRANTS

Section 10 of the 1977 Act amends section 109(b) of the FWPCA to increase the flexibility in the expenditure of grant funds for wastewater treatment works operation and maintenance training. It also increases the authorization for such grants from $250,000 to $500,000. Under the provision, the Administrator may exempt such grants from the priority list requirement of section 204(a)(3) of the FWPCA. Agency guidance for application and implementation of subsection 109(b) of the 1977 Act, will be distributed to EPA Regional Administrators and will be available for State use.

Changes to the regulations implementing this amendment are made in §§ 35.915(a), 35.920(e), and 35.930-1(b).

MISCELLANEOUS COMMENTS

The Agency has also received comments and questions on topics not covered by the categories dealt with above. One organization asked that nonprofit agencies be eligible as 201 grantees in rural areas which might otherwise be neglected by a public entity. Two sections of the Act preclude such an approach. Section 201(g)(1) provides for grants to States, municipalities or intermunicipal or interstate agencies. Section 204(b)(1)(C) requires that a grantee have certain "legal, institutional, managerial, and financial" capabilities. Without a change in the law, the Agency cannot make grants for 201 projects to nonprofit agencies.

A similar response must be made to those who suggested that the Federal share of all 201 projects be increased to 85 percent or even 100 percent. Sections 202(a)(1) and 202(a)(2) specify a Federal share of 75 percent for conventional projects and 85 percent for eligible innovative and alternative projects.

The Urban Environment Conference asked that these regulations be aligned with the work of the Agency's Task Force on Minority Business Enterprise. The task force has made policy recommendations which will apply to Agency grant programs. These recommendations will be published for comment and any decisions made thereafter will apply to the 201 program. Inclusion of task force findings would be premature at this juncture. The Urban Environment Conference also asked that 201 regulations provide for the health and safety of workers during the construction and operation of a sewage treatment plant. While the well-being of such workers is of great concern to the Agency, the promulgation and enforcement of worker safety standards is the province of the Occupational Safety and Health Administration (OSHA). The Agency is not in a position to review or enforce OSHA regulations.

The New Jersey Department of the Public Advocate called on the Agency to include a fair housing review as a component of the 201 process and to insure that population projections are not based on potentially exclusionary zoning but instead include allocations for low and moderate income housing. The Agency is sensitive to its fair housing obligations and does not want communities to use 201 policy as an excuse to perpetuate discriminatory practices. Yet, there are forceful reasons why a 201 facility plan should not become an overall community development plan. The delay inherent in the many local issues that might be thus injected would make the goals set by the Act impossible to achieve. The Agency does have guidance insuring construction grants program compliance with title VI of the Civil Rights Act of 1964. The Agency is also considering additional administrative measures to enhance compliance with title VI.

As for the use of population projections that may not include an allocation for low and moderate income housing or may be based on exclusionary zoning, it should be noted that the population projection approach outlined in the cost-effectiveness analysis guidelines is a joint Federal/State/local venture. State population figures are determined on the Federal level to insure national consistency. These figures are then broken down by State and local agencies. During this disaggregation process, local problems and trade-offs can be considered in some detail when determining population figures for a given community or region. State and local governments are in a far better position than EPA to determine the appropriate disaggregation methodologies. Consistent, overall State totals which provide for some flexibility best serve the water quality objectives mandated by the Act by avoiding plant overdesign and by spreading resources to as many eligible communities as possible.

The National Marine Fisheries Service asked that these regulations prohibit the filling of wetlands and provide for consultation with the Departments of Commerce and Interior if wetlands will be disturbed by a 201 project. Regulations for the construction grants program refer to environmental requirements in general terms because so many laws and executive orders dealing with special environmental matters apply to the program. It should be noted that Executive Order 11990, relating to wetland protection, is explicitly mentioned and followed in general EPA grant regulations published as final rules in the FEDERAL REGISTER on June 30, 1978 (40 CFR 30.410-5 as found on 43 FR 28486). EPA recently issued a statement of procedures defining policy for use in assessing the impacts of Agency actions on floodplains and wetlands. The construction grants program will issue its own program guidance to supplement the Agency procedures. It will also implement the requirements on wetlands that are expected to be included in the upcoming revision of 40 CFR Part 6, Preparation of Environmental Impact Statements.

Finally, it was suggested that these regulations require preparation of an economic impact analysis statement under Executive Order 12044. The Agency believes that the promulgation of these regulations does not impose economic costs large enough to necessitate such an economic impact analysis.

TECHNICAL AMENDMENTS

Technical amendments to the construction grants regulations were proposed in the June 2, 1978, issue of the FEDERAL REGISTER. The purpose of the technical amendments is to make, in conjunction with the final promulgation of Clean Water Act changes, other changes which are necessary to ease administration of and participation in the construction grants program. These changes include changes based upon operating experience as reflected in program requirements memoranda; changes based upon deviations from the current regulations which have been issued by the Director, Grants Administration Division; changes that correct operational problems or which appear to be administratively desirable; and changes which simplify the language and readability of the regulations.

The discussion of the major changes and the public comments which were received are presented below. We do not discuss provisions on which no comments were received or which remain as proposed. Nor do we discuss a number of comments of less widespread interest. A fuller discussion of all sections that were proposed and other comments can be obtained by writing to Michael B. Cook at the address listed above. This complete discussion will be mailed to all those who commented on the technical amendments.

§ 35.900. This section is promulgated substantially as proposed. A new paragraph (c) has been added to advise people of the availability of technical and guidance publications.

§ 35.901. For the reasons for the addition of this new section, see the discussion below under § 35.935-1.

§ 35.903. The second sentence of paragraph (j) is being revised to clarify which costs should be claimed in the initial request for payment. This section is promulgated substantially as proposed.

Reimbursement and "grandfathered" planning phase-out (the former § 35.905-4, and §§ 35.917, 35.925-18). Revisions to these three sections were proposed to provide for two related, new transition rules.

First, we proposed an orderly phasing out of projects previously allowed to proceed, subject to reimbursement through grant award at a later date. (See § 35.925-18.) Under the present rule, most projects do not receive such reimbursement. The proposed rule would have required those projects presently entitled to reimbursement to obtain the reimbursement through grant award by March 31, 1979, or March 31, 1980, in some cases, or be barred from obtaining the reimbursement. This change is based upon a major program change made by the 1972 amendments to the Act; while section 8 of the prior Federal Water Pollution Control Act (FWPCA) permitted funding on either a reimbursable or concurrent basis, the 1972 Amendments limited the Agency's reimbursement authority to that reimbursement authorized by section 206 of the Act.

Second, we proposed phasing out the "grandfather" provision for planning performed before the enunciation of the new statutory requirements and implementing administrative procedures now applicable to facility planning. (See § 35.917.) Under the previous rule, facility planning determined by the Regional Administrator to have been initiated before May 1, 1974, is required to comply with those facility planning requirements determined appropriate by the Regional Administrator. The proposed rule would require compliance with all the facility planning requirements before award of any step 2 or step 3 grant. There was an extension until April 1, 1979, provided for planning initiated before May 1, 1974. When the subpart first detailed facility planning requirements in 1974, the Agency did not wish to require substantial revision or abandonment of prior planning efforts, particularly since that would have entailed a dramatic slowdown in grants for necessary projects and the possible loss of funds by States through the reallotment process. The Agency now desires all grantees to achieve compliance with the administrative requirements which assure attainment of the statutory objectives. Since facility planning requirements are now more thoroughly understood and procedures streamlined, this phaseout should result in minimal delay to projects, particularly if States and municipalities take the necessary steps soon to assure funding for previously planned projects.

About 15 comments were received on this proposal. Several comments expressed support for the phasing out of the planning and reimbursement transition.

The major comments received concerned the short-time period between final promulgation of these regulations and the effective dates of the phaseout, proposed as March 31, 1979 and 1980. The major obstacle to meeting the original dates was the fact that State priorty lists for fiscal year 1979 are already complete. In States which do not utilize a reserve for step 1 or step 2 assistance, this could pose a significant problem. Also, in some cases, locally financed step 2 work is awaiting completion of facility planning. Therefore, we have decided to extend each of the proposed dates by 1 year.

In other cases, where extenuating circumstances (such as preparation of an environmental impact statement which is underway) prevent award of grant assistance by the deadline, deviation requests will be considered. In most cases, however, it is of overriding importance to bring in and complete any step 1 work still underway, so that projects necessary to meet enforceable requirements of the Act can proceed through steps 2 and 3 in a manner consistent with the requirements of titles III and IV of the Act. States should utilize the step 1/step 2 reserve to fund facility planning and design already underway where projects would not obtain priority for step 3 under the approved project priority system.

§ 35.905. This section contains the definitions of terms applicable to this subpart. Formerly, each defined term had its own section number. However, this made insertion of new definitions in alphabetical order difficult, since it necessitated renumbering the other definitions and correcting cross references. Therefore, in accordance with guidance issued by the Office of the Federal Register, the section designations have been deleted. All definitions will continue to be shown in § 35.905, with the defined term in italics. All cross-references to definitions will refer to § 35.905.

§ 35.905, definition of "ad valorem tax." Although we did not propose the addition of this definition, it is appropriate to add it given its importance in the user charge provisions.

§ 35.905, definition of "construction." This proposed amendment deletes from the definition of "initiation of construction" the different definitions which were applicable for work initiated prior to November 1, 1974.

Several commenters questioned the new definition of initiation of step 1 work, i.e., the approval of a plan of study, since that action usually takes place at the same time as step 1 award and they felt that the more common action (the grant award) should be used as the definition. It is true that the award of step 1 assistance denotes approval of the plan of study in most cases; however, there are situations where step 1 work is begun by grantees following approval of the plan of study accompanied by the reservation of funds as authorized in § 35.925-18(a)(1). We would not want to omit this circumstance from the definition, thereby making ineligible some step 1 work of these grantees. Since step 1 grant awards should never take place prior to approval of a plan of study, and since it usually is the same thing, we have retained the defintion we proposed.

Two questions were raised about the problems created in the transition before April 1, 1981, by the new definitions of initiation of step 1 and step 2 work. This section is one of the provisions where the old definition will continue to apply to phaseout situations until the transition is completed before April 1, 1981. Until then, assistance will be awarded to the transition projects under the old definition. Paragraph B.1. of appendix D will be applied to new grant awards for the transition projects under the old definition.

§ 35.905, definition of "municipality." The Agency proposed a clarification of the definition of "municipality" in this section because the current definition of the term has raised several questions regarding the eligibility of special districts for funding under this program. This revision clarifies the Agency's position by expanding the description of the types of special districts which are and are not eligible. Several comments questioned the definition as it relates to eligibility of State agencies for grants. The definition of municipality does not affect the eligibility of State agencies. States and their agencies are eligible in their own right (see § 35.920-1).

In reviewing the comments which were received on this section, we concluded that paragraphs (b)(2) and (b)(3) were redundant. Therefore, we have deleted paragraph (b)(2). The key difference between an eligible and ineligible district is whether the district provides services to the surrounding community or only for itself. If it does not serve the surrounding community, even a special district which has wastewater treatment facilities before passage of the 1972 amendments is not grant eligible.

§ 35.910-2. Paragraph (c) of this section was revised on January 10, 1978. That revision inadvertently did not distinguish between funds deobligated during their initial allotment period and funds deobligated after their reallotment date. Historically, in this program, funds deobligated prior to their reallotment date are treated as are all other funds from that allotment (i.e., they are subject to reallotment if not reobligated), and the regulation need not deal with those funds. However, we treat other deobligated funds as section 205(b)(2) of the statute requires for funds "released by the payment of the final voucher for the project." We have revised paragraph (c) to describe how to treat these deobligations.

However, it has been brought to our attention that this statutory requirement may create accounting difficulties when funds which originated in one allotment are subsequently treated as a later allotment. For this reason, we intend to examine this procedure in depth during the next several months in order to determine what changes, if any, to the regulations or statute might be desirable. Individuals (particularly States) wishing to submit their views for this study are invited to do so by sending them to: Mr. Harold P. Cahill, Jr., Director, Municipal Construction Division (WH 547), EPA, 401 M Street SW., Washington, D.C. 20460.

§ 35.912. We have made textual changes to agree with the new program thrust of State management assistance grants and the delegation of § 35.913 (which was done with the promulgation of the interim subpart F on April 25).

35.917. One commenter questioned the revision of the final sentence in paragraph (b), which in effect defines "cost-effective" as the "most economical * * * recognizing environmental and social considerations." We do not believe the word "economical," when modified by the reference to environmental and social considerations, will mislead the public to think that the "cheapest" solution is desired. We believe that the revision of this sentence as proposed is better than the former regulation in briefly explaining what cost-effective means. Therefore, we have retained the language proposed but have added a cross-reference to appendix A to ease further interpretation.

Questions were raised about the meaning of paragraph (e) relating to water quality management and outputs. One commenter argued that we should not withhold construction grants because the State fails to produce water quality management outputs. It was argued that the provision ignores typical State/local relationships and further that the unavailability of State outputs and case-by-case determinations would delay the program. Section 208(d) of the Act requires EPA to insure that treatment works conform to approved areawide plans. The revised paragraph (e) specifies the facility-related information that must be available and used in planning treatment works. Coordination of the two programs, as mandated by the Act, will induce coordinated State and local action that will produce a better overall water quality effort.

We have deleted the old paragraph (f) which references the Agency's facility planning guidance. The new paragraph § 35.900(c) makes appropriate reference to the availability of all Agency construction grants guidance.

§ 35.917-1. The revision to paragraph (d) is to clarify the language and to add a reference to appendix A in which the cost-effectiveness guidelines are found. The revision to paragraph (d)(2) adds mention of nonstructural methods (see discussion in appendix A, cost-effectiveness analysis guidelines).

The part of paragraph (d)(5) dealing with best practicable waste treatment technology (BPWTT) has been moved into paragraph (d)(4) to better clarify the relationship between applicable effluent limitations and BPWTT. The previous reference in (d)(4) to not less than secondary treatment, although technically correct, is out-of-date in light of current BPWTT requirements.

In paragraph (e), we have eliminated the requirement for submission of the NPDES permit. A commenter suggested that this be done in accordance with our proposal to eliminate the permit submission requirement from § 35.925-6. The permit number must be provided.

Paragraph (g) has been revised to require a summary of public participation in the development of the facility plan. The previous regulation required a summary of meetings. Since public participation may be achieved through means other than meetings or hearings, particularly in accordance with the proposed new requirements in part 25, this revision is appropriate.

A new paragraph (l) incorporates the requirement for inclusion of total project costs and estimated charges to customers in the facility plan. This requirement was established in program requirements memorandum 76-3 (August 16, 1976).

We have added a new paragraph (m), based upon public comments received on § 35.920-3. The new paragraph requires a statement as to the availability and estimated costs of the proposed site(s). See additional discussion under § 35.920-3.

Some commenters also questioned the effective date of the revised facility planning requirements in this section. The effective date this section is October 1, 1978. Step 1 grants awarded after September 30, 1978, or facility planning initiated after September 30 without Federal grant assistance, are required to comply with these regulations. Note the relationship of the transition provisions to the effective dates; no step 2 grant will be awarded after March 31, 1980, if the facility planning does not comply with current requirements.

§ 35.917-2. In the interest of brevity, we have deleted paragraph (a) from this section. That paragraph was redundant with other provisions of the regulations. No change in substantive requirements is intended. In paragraph (a), we have added the statutory requirement that, after a waste treatment management agency has been designated for an area, only the designated agency may receive grants. Further mention of this requirement is also in § 35.925-2.

Several commenters felt that 208 planning agencies should be eligible to receive step 1 grants. This section allows only agencies which are eligible to receive step 2 and 3 grants to receive step 1 grants. We did not propose to change this provision. We note that where 208 agencies are the most qualified to conduct all or any part of step 1 planning, a qualified management agency may be the grantee and may pass the funds through to the 208 agency via an interagency agreement to do necessary planning.

Several commenters raised questions relating primarily to the process for designation of a management agency or agencies under the statute. The water quality management regulations are being revised and were proposed in the FEDERAL REGISTER on September 12, 1978 (43 FR 40742). Those regulations provide for designation of management agencies.

§ 35.920-3. Although we did not propose changes to paragraph (a), we have included in paragraph (a)(1)(iii), reference to the public participation program. Though the shape of the new program is not yet finalized, it is appropriate to request grantees to describe their intended program in the

step 1 application, whether the new or old requirements are applicable.

Paragraph (b) has been rewritten to improve style, to correct references, and to add references to the existing requirements for intermunicipal agreements, allocation of costs to Federal facilities, project schedules, and sewer use ordinances. Experience has shown there are inordinate program delays unless intermunicipal agreements are obtained prior to the award of grant assistance. Inclusion of these references here will simplify compliance for grantees.

Several questions were raised concerning the requirement for a statement as to the availability of the proposed site (paragraph (a)(2)). A few commenters pointed out that a vague statement of availability is not sufficient, particularly in the case of land treatment projects where the feasibility and cost-effectiveness of the entire project may depend upon the firm availability of a particular site. On the other hand, it would not be appropriate, in most cases, to require fee simple interest at the step 2 stage, since most municipalities finance the purchase through bond proceeds which are generally not available until after step 3 award. Therefore, we have revised this paragraph to require "adequate information regarding the availability of the proposed site(s)." Regional offices and States are expected to use their judgment in determining what constitutes adequate information in the particular circumstances. The facility planning requirements have also been amended to require a statement of availability and cost of the site(s) (see § 35.917-1(m)).

Commenters raised several questions concerning the requirement for submission of proposed intermunicipal agreements at the step 2 application stage (paragraph (b)(6)). They desired to know the degree of certainty which would be required at this point. The degree of finality which is required in any particular case cannot be described with certainty in a regulation broadly applicable to all cases. We would expect, however, the proposed agreement which is submitted to represent more than just the proposal of the grantee municipality; it should represent the product of discussions between the parties concerned, even if the agreement is not yet ready to be signed. In particular cases, where there are doubts regarding the participation of municipalities in the project, the regional office may find it necessary to request more definitive arrangements. Therefore, the requirement has been worded to say, "proposed or executed (as determined appropriate by the Regional Administrator) * * *."

§ 35.925-7. Although no revisions to paragraph (e) were proposed, it has been revised to delete reference to a date which has passed and to emphasize the current requirements for BPWTT and reuse/recycle technology.

§ 35.925-8. The addition of paragraph (b) is intended to enforce decisions reached in the environmental review process, consistent with program requirements memorandum 75-26 (formerly program guidance memorandum 50, June 6, 1975).

A commenter on this section suggested EPA's denial or conditioning of award on compliance with environmental assessment conditions addressing secondary impacts is an inappropriate entry of EPA into land use and growth control. The commenter recommended that the program requirements memorandum issued in 1975 on this subject be rescinded as well. EPA is required by the National Environmental Policy Act to consider secondary impacts of its construction grants projects and we, therefore, could not accommodate his suggestion.

§ 35.925-12. See discussion under § 35.935-3, below.

§ 35.925-15. The revision of the first sentence clarifies the current regulation by making it clear that sewer projects which are solely for the purpose of handling industrial wastes are ineligible. This would affect, for example, a project to extend an interceptor solely to an industrial park, with no transport of domestic wastes along the way. We believe this is consistent with congressional policy to encourage joint treatment, since in the absence of domestic waste there is not a joint aspect to the project.

The several commenters on this section felt, for the most part, that single purpose, or almost single purpose, projects should be permitted to proceed.

Some suggested deletion of the words "almost exclusively" as being too vague. We have found other expressions unsatisfactory. We would not consider an interceptor which serves a large industrial park, but happens to pick up domestic wastes from one residence on its route, to thereby lose its industrial purpose and become eligible for the Federal grant. Therefore, we believe the term "almost exclusively" connotes limited but appropriate discretion for the Regional Administrator necessary to determine eligibility under the program.

The definition of "waste treatment system" has been deleted from this section because the phrase, "complete waste treatment system" is defined in § 35.905.

The references to the pretreatment regulations in the final sentence have been corrected. Part 403 contains the Agency's new pretreatment regulation published in the FEDERAL REGISTER on June 26, 1978 (43 FR 27736). § 35.907 is promulgated in this package.

§ 35.925-16. This section deals with costs allocable to Federal facilities. We deleted a proposed parenthetical expression referring to such facilities in the District of Columbia and other jurisdictions receiving direct congressional appropriations. The reference would create administrative difficulties that we prefer to handle through the grant deviation process. Otherwise, this section is promulgated substantially as proposed.

§ 35.925-18. Significant revisions have been made in paragraph (a) of this section relating to the phaseout of authority for reimbursement. See the discussion of this under the heading reimbursement and "grandfathered" planning phaseout, above.

We made three changes to paragraph (b). We have added a reference to engineering costs associated with advance acquisition or advance construction to clarify such costs as allowable when prior approval has been obtained. We have added the cost of acquisition of an option for the purchase of eligible land to the advanced work which may be approved. We have further clarified this paragraph so the Regional Administrator may not approve such advance step 3 work unless an environmental review has been completed.

Several commenters indicated their approval of the clarification of eligible items in paragraph (b). One commenter, however, questioned the necessity for the completion of an environmental review before the Regional Administrator may authorize advance expenditures. We are advised by counsel that the Regional Administrator's authorization is a major Federal action requiring completion of a review (either negative declaration or environmental impact statement) under the National Environmental Policy Act. However, grantees should be aware the environmental review can be narrowed down to a particular item in cases where there is no controversy over the particular item and the item is common to all alternatives.

§ 35.926. Although no changes were proposed to this section, we revised paragraph (a) and § 35.920-3 to require a value engineering commitment, rather than proposal, with the step 2 application. The actual value engineering proposal would be submitted during step 2. The requirement for a full proposal at the application stage was inappropriate.

§§ 35.927 et seq. In §§ 35.927, 35.927-1, 35.927-2, and 35.927-3 several changes were proposed to update the regulations in accordance with current program policy. EPA has deleted the specific content of the infiltration/inflow (I/I) analysis. Program requirements

memorandum 78-10, issued on March 17, 1978, established some new options to the traditional method of I/I analysis in this program. The remainder of the changes proposed in these sections complement that memorandum by providing more flexibility.

Several questions were raised about the proposed language of § 35.927(b)(3) which appeared to require the actual rehabilitation to take place during the sewer system evaluation survey, thereby establishing with certainty the amount of nonremovable I/I. We did not intend this and have revised the language of that sentence to reference only the program for rehabilitation as part of the sewer system survey.

One commenter requested the rationale for the deletion of the phrase, "in each sewer system tributary" in § 35.927-1(a), indicating that the revision implied that only the sewer system owned by an entity is subject to I/I analysis. If the analysis for nonowned systems was not conducted, the utility of the analysis which was conducted would be distorted. We deleted this phrase to eliminate the inference that each minor tributary must be analyzed separately to determine if it, individually, was subject to excessive I/I. Even if more than one jurisdiction is involved, all parts of the system are subject to some sort of analysis. The language has been retained as proposed.

The language of § 35.927-2(a) as proposed included a typographical error which inadvertently deleted the requirement for a comparison of the cost of transportation versus the cost of rehabilitation and treatment for each I/I source. We have corrected this language.

Section 35.927-3(a) has been further revised to indicate minor rehabilitation can be accomplished in any step under a grant (not just step 1) and rehabilitation work under $10,000 (small purchase) is not subject to the requirement for formal advertising. We have also revised § 35.936-14, relating to force account work, to include the requirement for the Regional Administrator's approval of force account work for sewer rehabilitation during step 1 and step 2, not just for step 3.

Two commenters questioned the policy of EPA which prohibits funding of sewer system rehabilitation beyond the "Y" fittings which convey wastewater from individual structures or private property. They suggested we consider as eligible all sewer rehabilitation costs for any part of a line lying in a public easement. EPA considers eligible for new construction only those parts of the line up to and including the "Y" fittings. Therefore, in accordance with the definition of sewage collection system in § 35.905-19, EPA cannot fund rehabilitation work beyond the "Y" fittings. However, the municipality's costs of treating the pipe beyond the "Y" fittings up to the point which the municipality must fund may be calculated on an incremental, rather than proportional, basis. A new paragraph (c) has been added to § 35.927-3 to clarify this point.

§ 35.930-4. No changes were proposed to this section. However, in the final regulation, we have deleted reference to the requirement for BPWTT, secondary treatment, and effluent limitations, because those requirements are adequately covered in §§ 35.917-1 and 35.925-7.

§ 35.935-1. EPA proposed to create new paragraphs (a) and (b) to describe the grantee's responsibilities under these grants.

Paragraph (a) states EPA's position that EPA review and approval of project plans and specifications, under section 203 of the Act, does not relieve the grantee of its responsbilities for the design, construction, or use of the treatment works.

Paragraph (b) provides an explicit basis for seeking specific performance or recoupment of funds from the grantee, if the grantee fails to make good faith efforts to meet its obligations under the grant.

Several comments on paragraphs (a) and (b) demonstrated to us the need to explicitly set forth the Agency's policy assumptions underlying the establishment of paragraphs (a) and (b). These basic assumptions are set forth in new § 35.901, and paragraphs (a) and (b) are promulgated as proposed.

§ 35.935-3. We proposed to add a new § 35.935-21 (now renumbered § 35.935-3) because there has been some misunderstanding of the applicability of the real property acquisition regulations in part 4 of title 40 to this program. Questions have also been raised about other property requirements. The addition of this section does not add any new requirements; rather, it clarifies those which have been in effect and summarizes them in one place. The provisions in the 1977 amendments relating to land treatment and eligibility for land purchases make this more important.

One commenter suggested the requirement in paragraph (b)(1) that any acquisition be conducted in accordance with 40 CFR part 4 (and hence, the Uniform Relocation Assistance and Real Property Acquisition Policies Act) represents unnecessary Federal involvment in local affairs. He felt that where displacement is not involved, procedures to acquire noneligible land should be locally determined, and EPA should require only satisfactory evidence of sufficient interest in the site prior to award. However, the Uniform Relocation and Real Property Acquisition Policies Act requires EPA to apply title III of that Act to the acquisition of any interest in real property (even easements) to be used for a federally assisted project. Therefore, EPA has no discretion in this matter and must apply the current statute.

§ 35.935-9. The revision of this section was intended to clarify EPA requirements for prompt initiation of project work and to integrate the grant requirements more closely with the NPDES permit program. The text was broken into the three paragraphs for ease of use.

The revision of paragraph (a) clarifies the term "project" to mean step 1, 2 or 3. The new second sentence applies the same sanctions to all three steps. Several commenters suggested the final sentence of (a) be revised to address completion, as well as initiation, of construction. This has been done. Reference to "any project schedule" has been revised in the final regulation to refer to "the project progress schedule."

Paragraph (b) explains the grantee's obligations under the NPDES permit program as they related to actions the grantee takes under the grant program. We received several comments on the relationship between grant dates and NPDES permit dates. One commenter suggested that grant dates rather than permit dates be the governing dates and that all other schedules requirements be secondary and subservient to grant dates. Another commenter noted the present permit regulations allow such a "floating" date mechanism to be employed by EPA and NPDES States. Since the intent of the Agency is to improve the extent of municipal compliance with NPDES permit requirements, it will be necessary to use selected, fixed dates in most municipal permits in order to ensure enforceability in the event of recalcitrance by grantees with permit deficiencies. EPA is presently drafting a policy which delineates new operating procedures designed to implement this permit/grant approach. Consequently, no change has been made to the revision as proposed.

Paragraph (c) contains the same termination requirement as the former regulation, but includes the items which the Regional Administrator must consider in making his determination. This paragraph also clarifies EPA's expectations as to the time by which invitations for bids should be issued.

We received several comments on this paragraph. One commenter objected to the statement that invitations for bids are expected to be issued within 90 to 120 days after award, because sometimes grantees postpone work because of too great a demend on the construction industry in a particular area. The section provides that issuance of the invitation for bids (not contract award) should occur within 90 to 120 days after award. The use of the term "should" indicates that those dates are not mandatory. However, initiation of construction on all significant elements of project work within 12 months is mandatory.

Some commenters raised questions as to the definitions of "all significant elements" and "initiation of step 3 construction." "All significant elements" is not defined because we have concluded that it is necessary to leave this to the Regional Administrator to decide on a case-by-case basis. What is essential is that work be progressing speedily toward completion of construction. The term "initiation of construction" is defined in § 35.905. For step 3, it means issuance of a notice to proceed under a construction contract for any segment of step 3 work or if notice to proceed is not required, execution of the construction contract. That definition is applicable here, except, under the terms of this section, we expect initiation of all significant elements within one year.

Two comments on paragraph (c) urged changes to give the Regional Administrator more flexibility in termination of grants. Where flexibility beyond the 6 months extension is required, for good cause, the "deviation" process (see 40 CFR 30.1000 et seq.) should be used. This will insure that the termination requirement is consistent nationwide. Where good cause has existed in the past for exceptions to the termination requirement, deviations have been granted.

§ 35.935-12. This section has been restructured in list form for clarity. Reference has been made to the NPDES permit program to indicate the relationship with that program. New paragraphs (d) and (e) implement in the regulation the class deviation which was in effect since August 24, 1977, with respect to the operation and maintenance manual payment limitations as applied to segmented projects and multiple facility projects.

Several commenters requested a provision for waiver of the 90 percent payment holding provision for good cause or where the operation and maintenance manual cannot be completed until experience during initial operation has been achieved. EPA recognises (see program requirements memorandum 77-2) that final revisions to the O&M manual will be made after the initial start-up period. However, a manual which is satisfactory for the purpose of beginning start-up should be available for approval prior to completion of construction. If there are other "good causes" which would reasonably delay submission and approval of the manual, the deviation process must be used. EPA carefully reviews all deviations requests to insure that the situation truly justifies a waiver of the regulation. A new paragraph (b)(7) has been added to this section which provides that the plan of operation must include an operation and maintenance program for the sewer system. This requirement is in program requirements memorandum 78-10 and is included here for consistency and clarification. Existing written manuals, policy or guidance will suffice if they are adequate to meet current EPA requirements.

§ 35.935-16. This section is promulgated as proposed. Paragraphs (c) and (d) implement in the regulation the class deviation which has been in effect since August 24, 1977, with respect to the sewer use ordinance payment limitations as applied to segmented projects and multiple facility projects.

§ 35.936-13. No changes were proposed to this section. However, some changes have been made on advice of the Office of General Counsel.

In paragraph (a)(1), an addition has been made to require identification of the "salient requirements" of items of equipment when the grantee elects to procure by the two brand (or trade) names or equal procedure. In direct Federal procurement, salient requirements must be included in the specification itself. We feel that the mandatory reference to two items itself substantially identifies the salient requirements reflected in both and that while Federal rule reflects the best practice, it would be unnecessarily burdensome to grantees. However, the EPA grantee must be prepared to identify the salient requirements when an "or equal" issue arises under EPA program review or in a bid protest.

In paragraph (b), we are adding a provision relating to sole source procurement for innovative technology. See the discussion of this subject above under innovative and alternative technology. We have also added a cross-reference to § 33.500 et seq., for the applicable procedures to be followed when sole source procurement is used.

Minor revisions have been made to paragraph (c) to reflect experience obtained in program reviews, protests, and in litigation relating to grantee "experience" requirements, including bonds.

In conjunction with the final promulgation of this section, we are also proposing two additional changes for comment. The last sentence of paragraph (a)(1) relates to manufactured materials, such as pipe. The current regulation provides that if a single material is specified, the grantee must be prepared to justify this selection of only one type of material.

However, agency program reviews and determinations of protests under § 35.939 indicate that the application of this rule has not corresponded sufficiently with the basic requirement for competition (see § 35.936-3). Program requirements memorandum 75-5 (formerly PG 19A, August 8, 1975) states the interrelationship of these policies as follows:

"With regard to materials, such as pipe, it is not mandatory that two or more different types of material be specified; however, maximum competitive bidding is encouraged commensurate with sound engineering practice and requirements. * * * It is preferable to use performance specifications for materials based upon accepted nationally known standards such as AWWA, USAS, ASTM, AASHO and Federal specifications and standards."

Consideration is being given to amendment of the regulation to better achieve competition within and between types of material (particularly pipe), in the interest of affording an opportunity to compete and insuring reasonableness of prices, unless there is a sound engineering justificaton based upon specific site conditions which supports any restrictions upon competition.

In paragraph (c) we propose to add as a new final sentence the following: "No experience restriction will be permitted which unjustifiably reduces competition or innovation." This is in effect the rule which has been developed in protests decided under § 35.939. We invite public comment on this proposed addition.

We invite public comment on these two proposed changes. Comments should be addressed to the Director, Grants Administration Division, at the address given above. The deadline for receipt of comments on these issues is November 30, 1978.

§ 35.936-20. Paragraph (c) of this section was proposed to be amended to clarify that costs incurred by the grantee in complying with § 35.937-6 are allowable, even when incurred prior to award. One commenter suggested EPA should be equally explicit regarding the grantee's costs of carrying out protest procedures required by § 35.939. The paragraph has been further amended to do this.

§ 35.936-22. Bonding and insurance requirements were previously in § 35.935-3. Since the publication of the procurement regulations in § 35.936, we feel the bonding and insurance requirements are more appropriate in this section. It is promulgated substantially as proposed.

§ 35.937-2 This section is promulgated substantially as proposed.

§ 35.937-5. The proposed deletion from paragraph (b) of the reference to 40 U.S.C. 541-544 (commonly referred to as the "Brooks bill") concerned consulting engineering firms and several of their national professional societies. This amendment was suggested by the EPA Office of General Counsel on the basis of the April 25, 1978, decision by the U.S. Supreme Court in *National Society of Professional Engineers* v. *United States* (see especially footnote 21). In the opinion of the EPA General Counsel, the Supreme Court's decision resolved any doubt that the procurement of professional engineering services is subject to general antitrust requirements unless specifically exempted by Federal statute, e.g., the Brooks bill. The Brooks bill is applicable only to direct Federal procurement, i.e., contracts for engineering and architectural services awarded by Federal departments and agencies. There is no Federal statute which exempts Federal assistance programs from compliance with Federal antitrust laws.

The proposed amendment authorized negotiation procedures established by State or local law. This provision has been amplified to state more clearly the alternatives available to grantees. If State statutory or local code procedures exist or are adopted which are comparable to the negotiation provisions of the Brooks bill, such procedures may be utilized. Such procedures can assure reasonableness of price if the grantee has the staff capability, or otherwise acquires it (e.g., through assistance from another local or State agency) to develop an independent cost estimate to serve as the basis for price negotiations with the selected consulting engineering firm. In connection with the development of such procedures, local governments may also wish to review the March 20, 1978, U.S. Supreme Court decision in *Lafayette* v. *Louisiana Power and Light Company*.

The proposed amendment has also been amplified to make it clear that if no State statutory or local code procedures exist, a municipality may adopt either (1) procedures comparable to those observed by the Federal Government under the Brooks bill or (2) price-competitive procedures. If a municipality wishes to utilize a price-competitive system for negotiation of engineering fees, however, this must be based upon an objective negotiation process in which award is based upon previously announced objective evaluation factors, including price and other considerations (such as professional competence and technical merits of proposals). EPA does not require or encourage award of engineering agreements solely on the basis of price.

§ 35.937-6. No change was proposed to this section. However, from time to time, we have been asked why grantees who are required to comply with §§ 35.937-2, 35.937-3 and 35.937-4 are required to submit documentation of negotiation methodology used (negotiation is covered by § 35.927-5) when other grantees are not (see paragraph (a)(2)(i)). We have reviewed the requirement and have concluded that there is no reason for the difference. Further, all grantees are required to document the basis for selection and basis for the price under § 35.936-12. These records are available for EPA should we need them. Therefore, we have deleted the requirement for submission of the negotiation methodology used.

§ 35.937-12. We proposed a new paragraph to reference the requirement of § 35.936-5(b) regarding the status of subcontractors when the engineer is acting for the grantee in the role of construction manager. The proposed new paragraph (d) indicates that when an engineer procures items which are not covered by the provisions for architectural and engineering services procurements, the appropriate procedures of § 35.938 (formal advertising) or part 33 apply. We also modified paragraphs (a) and (b).

One comment on paragraph (d) requested we clearly indicate that professional services are excluded from the requirement of the other sections mentioned. We have specifically excluded engineering services. However, professional services other than engineering services would be procured under part 33. Clarification was also requested as to what subcontracted services might be appropriately procured under these other sections. An example of services which should be procured under part 33 regulations is accounting services for the development of user charge and industrial cost recovery systems. Sewer line cleaning or construction of a prototype unit should be procured under § 35.938 et. seq.

Revisions to paragraph (b) were proposed to clarify requirements which the engineer must comply with in awarding subcontracts. The proposed addition of (b)(3) has been revised and renumbered as (b)(7). Rather than incorporating the type of contract provisions of the entire § 35.937-1, we have included only the prohibition on the illegal types of contract (i.e., cost-plus-percentage-of-cost and percentage-of-construction-cost). Also, references have been added to the appendix C-1 clauses which are inherently (under the language of the clause) applicable to subcontracts.

§ 35.938-4(h). The addition of the phrase "for good cause" to paragrapn (h)(2) is consistent with program requirements memorandum 78-8, February 13, 1978 (published in the FEDERAL REGISTER, April 7, 1978, 43 FR 14725). It is retained here.

The new paragraph (h)(5) permits award of a prime contract when there are unresolved procurement issues or protests relating only to the award of a subcontract or procurement of a subitem. This rule has been developed in the protest process. Adoption of it in the regulations will make it legally impossible to use this rule in situations not involving protest, will make it easier to enforce in the protest process, and will expedite the procurement process.

Another commenter suggested a new (h)(5)(ii) be created which would state, "Will not materially affect resolution of the protest." Although we felt this concept was implicit, we have no objection to adding it and have done so. This suggestion highlighted a problem in the proposed regulation, namely, two different subjects were being addressed. Therefore, the five items have now been rearranged into two groups—those pertaining to award of the contract and those pertaining to resolution of the protest.

One commenter asked whether the final sentence of this paragraph implies that a bid must be rejected as nonresponsive if a federally required listing or selection requirement is not met by the contractor. This sentence did not imply that. However, we have decided to delete that sentence due to current uncertainty about the future of Federal listing requirements.

§ 35.938-5. No changes were proposed to be made to this section concerning negotiation of contract amendments (change orders). However, paragraph (d)(3) indicated that detailed cost documentation may be required by EPA when a contractor is unable to certify that his costs are complete, current, and accurate, while the certification on EPA's summary format (EPA Form 5700-41) requires a contractor to certify that his cost data are complete, current, and accurate. Therefore, paragraph (d)(3) has been revised to correct this error to indicate that more detailed cost documentation may be required when a contractor is unable to certify that his cost data are complete, current, and accurate.

EPA's Office of Audit published a report in April 1978, that addressed the contract change order procedure in the construction grants program. That report recommended deletion of the reference to a provisional overhead rate in § 35.938-5(d)(3). By definition, a provisional overhead rate is a tentative percentage or dollar factor agreed upon by the grantee and the contractor. It is negotiated for interim reimbursement pending final settlement of the actual allowable overhead rate. Change orders should be able to "stand by themselves," and should not be renegotiated when the change order work is completed. For this reason, a final overhead rate should be negotiated for a change order instead of a provisional overhead rate. Therefore, as recommended by the EPA audit report, we have deleted the last sentence in paragraph (d)(3).

§ 35.938-6(c). This amendment was proposed to deal with a problem which was brought to our attention with regard to progress payments on specifically manufactured equipment. EPA's primary reason for encouraging progress payments to equipment manufacturers is to reduce the interest cost to the manufacturers, thereby reducing the bid price and the costs to the taxpayer.

An equipment supplier complained about the additional labor, expense and paperwork needed to comply with the recordation requirement, and asserted that this diminishes the usefulness of progress payments to the companies and increases the cost to EPA. If elimination of the recordation requirement for items valued at less than a certain amount is reasonable, we judge that considerable paperwork can be eliminated. We proposed a $200,000 cutoff level and particularly solicited comment.

Two commenters felt that $200,000 was an appropriate level for application of the recordation requirement. Two other commenters felt that 10 percent of the contract value, but not less than $300,000, would be appropriate. The amount of the contract value is not pertinent, since what is important is the absolute dollar level at which the Federal Government is willing to risk nonrecordation. In view of the comments received, we have decided to retain the $200,000 level.

Some commenters felt that even at the higher level recordation should be discretionary with the grantee. Another commenter suggested that the recordation requirement implied a lack of mutual trust and confidence. We disagree with both comments. The recordation requirement was established for the purpose of protecting the interest of the Federal Government as to the work performed (as opposed to the value of the item) when progress payments are made on large equipment purchases.

§ 35.938-7. No change was proposed to this section. However, many questions have been raised over the last several years and in comments recently received as to whether the exception for State law which is mentioned in § 35.938-6 is also applicable to § 35.938-7. We have always responded that it is. We decided to add the specific exception language to this section.

§ 35.938-9(b). This section is promulgated substantially as proposed with a corrected citation. We have also added references to the appendix C-2 clauses which are inherently (under the language of the clause) applicable to subcontracts.

§ 35.939. No changes were proposed to this section. However, we have made a series of technical changes to the language. These are identified in the supplementary discussion of the technical amendments. Also, we added a new paragraph (1) to advise the public that the EPA General Counsel periodically publishes an index of Regional Administrator protest determinations.

§ 35.940-1. Paragraph (q) was proposed to be revised to delete the reference to allowability of State agency review costs in accordance with §§ 35.912 and 35.913 because of the new authority in subpart F, and to be replaced with the eligibility of start-up services. The eligibility of a plan of operation was also specifically added. Both these additions are in accordance with program requirements memoranda issued on November 29, 1976 (PRM 77-2 and PRM 77-3).

One commenter was concerned about the deletion of eligibility of fees under § 35.913 until the fee system is completely phased-out in favor of State management assistance grants. In order to avoid the necessity of amending the regulation next April 25, the eligibility of fees has been deleted. However, States which previously instituted fee systems may continue to charge fees and the grantee's costs in paying those fees are allowable in the interim, in order to permit an orderly phasing-out of the fee system no later than April 24, 1979.

§ 35.940-2. Although no changes were proposed to this section, we have made several clarifying additions. It was brought to our attention that the fact that the plan of study is an unallowable cost should be explicitly mentioned here. We have done so. We have also explicitly stated that privately owned treatment works are unallowable, except as authorized in section 201(h) of the Act.

§ 35.940-3. In this section, we proposed to delete paragraph (d), acquisition of an operable portion of a treatment works. The "Explanation" described the limited circumstances under which such acquisitions might be approved. However, we have decided to retain paragraph (d), with clarification. Comments on this topic confirm our opinion that more detailed guidance is needed to clarify when such costs may be allowable. Since the factors used to review these requests are extensive, we have decided to issue complete guidance instead of increasing the regulations on a matter of limited and rare applicability.

§ 35.945. The first paragraph of this section is promulgated as proposed. In connection with this section and with § 35.903, it was suggested that the regulations be revised to permit use of letter of credit for construction grants. EPA is currently involved in a study concerning cash management. Feasibility of letter of credit method of payment for construction grantees is one of the items being considered.

Although no changes were proposed to the former paragraph (e), it has been broken into two paragraphs and revised. The new paragraph (e) deals only with final payment. We moved the provision dealing with assignment and release to a new paragraph (f). We deleted the requirement for submission of separate assignment and release forms. Instead, the grantee's acceptance of the final payment constitutues his agreement to the assignment and release. We expect this change to eliminate considerable unnecessary paperwork.

§ 35.960. No changes were proposed to this section. However, we have added a new paragraph to advise the public that the EPA General Counsel periodically publishes an index of grant appeals decisions.

Appendix C-2, clause 11. No changes were proposed to be made to this clause. However, it has been brought to our attention that there is an inconsistency between the first sentence of paragraph (a) of this clause and the parallel clause (clause 10) in appendix C-1. When these clauses were first drafted in 1975, they both read, "If the EPA Project Officer determines * * *" As a result of public comment, they were both supposed to be changed to read, "If the owner or EPA determines * * *" Inadvertently, this change was not made in the C-2 clause. We are making this change at this time.

Appendix D, paragraph b5. This section is promulgated as proposed with clarifying language here and in paragraphs b1, b2 and c. This policy also applies to grants awarded under Pub. L. 84-660.

Other sections. Several commenters proposed that we make changes to sections, or parts of sections, which had not been proposed to be changed. Where we felt that the changes were truly of a technical nature and could be made without prior proposal, we have done so, as is noted in the text above. In some cases, however, the suggested changes were significant and inappropriate for promulgation as final rules without prior proposal. These comments will be retained on file for consideration in any regulatory changes which may be proposed in the future.

EDITORIAL CHANGES

Throughout the regulations we have made editorial changes to simplify the language. Several should be noted. We have eliminated the phrase, "but not limited to" following the word "include" or "including." We have deleted titles of cross-referenced sections in most cases (particularly from the subagreement regulations).

We made editorial changes in appendices C-1 and C-2, which contain clauses for inclusion in subagreements with engineers and construction contractors. Except for minor changes mentioned elsewhere in the preamble, no change in meaning whatsoever is intended. Old supplies of appendices C-1 and C-2 may continue to be used. However, grantees are cautioned that when using an old edition of appendix C-2, the new clause 17 (Buy American) must be added. Some grantees or engineers may prefer to use the new version of appendix C-1, because of the corrected reference to § 35.908 in clause 2.

Effective date: This subpart will be effective on October 1, 1978, unless otherwise specified in particular sections. Good cause exists for an effective date prior to 30 days after publication in the FEDERAL REGISTER because many of the requirements are made effective by the 1977 act on October 1, 1978, and because of the need to start these interrelated requirements together to ensure program continuity.

Dated: September 15, 1978.

DOUGLAS M. COSTLE,
Administrator.

40 CFR Part 35 is amended by revising subpart E to read as follows:

Subpart E—Grants for Construction of Treatment Works—Clean Water Act

[6560-01-M]

Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

[FRL 1041-1A]

PART 35—STATE AND LOCAL ASSISTANCE

Subpart E—Grants for Construction of Treatment Works

AGENCY: Environmental Protection Agency

ACTION: Rule

SUMMARY: These regulations are intended to encourage, provide for, and assist public participation in the Municipal Wastewater Treatment Works Construction Grants Program carried out under the Clean Water Act. The regulations specify that public participation in that program applies to development of the State priority system and annual list of projects designated for Federal funding, to development of plans for wastewater treatment facilities, to development of user charge and industrial cost recovery systems, and to the delegation of administrative responsibilities for the Construction Grants Program to the States. The regulations establish a two-tier program of participation in the facility planning process. This allows EPA, States, and grantees to focus their resources and energies, and those of participating citizens, on the minority of projects which have the greatest financial environmental impacts and which will benefit most from active community involvement. The regulations contain fewer public participation requirements for the large majority of projects expected to be less costly or to have less significant impacts. The regulations permit the exemption of projects which involve only minor upgrading of treatment works or minor sewer rehabilitation from many of the public participation requirements of these regulations.

DATES: These regulations are effective on February 16, 1979.

ADDRESSES: Comments submitted on these regulations may be inspected at the Public Information Reference Unit, EPA Headquarters, Room 2922, Waterside Mall, 401 "M" Street, S.W., Washington, D.C. between 8:00 a.m. and 4:30 p.m. on business days.

FOR FURTHER INFORMATION CONTACT:

- Michael B. Cook, Acting Director, Facility Requirements Division (WH 595), Environmental Protection Agency, 401 "M" Street, S.W., Room 1137ET, Washington, D.C. 20460, telephone 202/426-9404.

SUPPLEMENTARY INFORMATION

The regulations for public participation in the Construction Grants Program were proposed in the FEDERAL REGISTER on August 7, 1978, along with overall public participation regulations which would cover programs under the Resource Conservation and Recovery Act and the Safe Drinking Water Act, as well as the Clean Water Act (40 CFR Part 25). The Part 25 regulations are being published in final form in the same issue of the FEDERAL REGISTER as the regulations specific to the Construction Grants Program.

The preamble to the overall Part 25 regulations includes a complete discussion of public participation activities conducted by EPA in the development of the overall regulations and the Construction Grants Program public participation regulations.

RESPONSE TO PUBLIC COMMENT

A large volume of comment was received on the overall Part 25 regulations and on the regulations specific to the grants program. Many general comments were relevant to the grants program regulations as well as to other programs under the three covered Acts. A full discussion of these general issues is included in the preamble to 40 CFR Part 25. They include consistency of public participation requirements, discretion and flexibility in the requirements, role of elected officials, composition and use of advisory groups, advance notice of public hearings and meetings, and others. The sections which follows describe EPA's response to those more specific issues and comments which pertain to the Construction Grants Program:

1. *Delay of Wastewater Treatment Projects.* Many commenters, especially some State and local governments, expressed sincere concern that the new requirements would delay the construction of much needed treatment facilities. They cited the requirements for additional meetings and public consultation, the need for earlier public notice, the additional reporting requirements, the additional demands on their staffs, and additional oversight and review functions as potential sources of delay during the Step 1, facilities planning stage.

Some citizens and public interest groups who commented on this issue, however, noted that the most serious delays came not during the planning, but during the design and construction stages. Often it was not until these later stages that individual citizens and local groups realized significant fiscal and growth impacts of expensive, oversized treatment facilities.

It is the Agency's position that this is an environmental, not a public works, program where the fiscal integrity and sound environmental management of the program are paramount. Delays, if any, in facilities planning due to increased public participation are anticipated to be more than compensated for by the selection of more appropriate treatment systems and more rapid progress in the design and construction stages.

2. *Resources.* Federal, State and substate agencies responsible for the Construction Grants Program were seriously concerned about the resource implications of these requirements. They were especially concerned about increased demand for monies and staff time.

The Agency acknowledges the need for some additional resources to adequately implement public participation in the program. All efforts have been made to minimize these demands while maintaining the integrity of the program. The distribution of the public participation work plan and the responsiveness summaries will reduce the need for EPA monitoring by fostering cooperation between grantees and citizens to ensure high quality program outputs. Also, the Agency has conducted a detailed resource analysis that indicated that the most resource intensive activity for the States and EPA is attendance by staff at public meetings and hearings; the regulations do not require such attendance, making this activity strictly discretionary. Since the Full-Scale Public Participation Program is more resource intensive than the Basic Public Participation Program, EPA expects that the Full-Scale Public Participation Program will be required of approximately 30 percent of projects.

The Agency is also making new resources available. State management assistance funds, under section 205(g) of the Act, and construction grants funds, under section 201, can be used by the States and grantees, respectively, to cover public participation costs. Furthermore, EPA is designating staff in its regional offices to assist in carrying out these requirements.

3. *Criteria for Full-Scale Public Participation Program.* The Agency received a number of comments on the criteria proposed for use by the Regional Administrator in determining which projects should have the Full-Scale Public Participation Program. Some commenters urged that the criteria be made less flexible by the addition of specific population size and project cost criteria. The Agency has decided to continue to allow the Regional Administrators a high level of discretion in determining which projects are likely to need additional public involvement based upon their assessment of cost, complexity and potential impacts. In the proposed regulations the Full-Scale Program was

mandatory only when it was determined early in the facilities planning process stage that an Environmental Impact Statement would be required, under 40 CFR Part 6. Recognizing the public and Congressional concern over the cost of advanced wastewater treatment (AWT) facilities that require very stringent wastewater treatment, the Agency has included AWT as a mandatory criterion for the Full-Scale Program. This will enable communities to give more careful consideration to less-costly systems and alternative treatment processes, such as land treatment.

Other than the EIS and AWT mandatory criteria, the Regional Administrator will require the Full-Scale Program only after a project meets two tests. The Regional Administrator must determine (1) that the project has the potential for community impact, as suggested by criteria listed in § 35.917-5(e)(1)(iii), and (2) that the existing local decisionmaking process would benefit from increased opportunities for public involvement. The Regional Administrator will exercise this discretion in light of the Agency expectation that approximately 30 percent of the Step 1 projects will be required to conduct a Full-Scale Program.

4. *Content of Full-Scale Public Participation Program.* Generally, citizens and public interest groups, as well as some government agencies, gave strong support to the content of the Full-Scale Program. They particularly supported the opportunities for public involvement and consultation early in facilities planning, the public participation coordinator, and the advisory group. Some commenters requested more discretion in using the advisory groups. They urged that they be encouraged, but not required.

The Agency has decided to retain the Full-Scale Program as initially proposed. Since it will only apply to those projects of high complexity or controversy, the presence of a core group of informed citizens—the advisory group—is considered particularly essential. It must be pointed out that the Basic Program, which will cover the large majority of projects, does not require the advisory group; however, grantees are at libertry to establish one at their discretion. The Part 25 regulations have been revised to provide grantees with significant additional flexibility in composing the membership of advisory groups.

5. *Small Community Impacts.* A number of commenters expressed concern over the impact of the regulation on small communities. They suggested automatic exemptions for small communities form the Full-Scale Program, and even the Basic Program.

The regulations allow the Regional Administrator extensive discretion in determining which projects should have a Full-Scale Program. First, the Regional Administrator must determine that one of the criteria suggesting community impact is likely to be present and second, having made that determination, the Regional Administrator must determine that more active public participation in the form of the Full-Scale Program would be of benefit in the particular community. In making this second case-by-case determination, the Regional Administrator is free to take into consideration the size and nature of the community where facility planning will occur.

In many cases documented by EPA, the cost and other impacts of wastewater treatment facilities are most severe in small, rural communities. The evaluation of less-costly, more acceptable alternatives may therefore require more, not less, active public participation. In many instances this will be best accomplished by the attention of a core group of interested citizens, with staff support, which is the cardinal feature of the Full-Scale Program. This decision will be made on a case-by-case basis by the Regional Administrator.

6. *Early Public Involvement.* Many citizens and public interest groups urged the Agency to require additional early public involvement, especially before the Step 1 grant is awarded and in the selection of the consulting engineer. Since pre-Step 1 activities are not grant eligible, the Agency has decided not to impose additional requirements beyond the performance standard for public information and consultation in the development of the plan of study.

Many private citizens and public interest groups urged EPA to require public participation in the selection of the consulting engineer. These commenters argued that this would encourage the selection of a consultant able to communicate effectively with the public and would lead to greater public confidence and support for the planning process. EPA agrees in part with this concept, but does not believe it is feasible to make consultation in engineer selection a requirement. Accordingly, the regulations encourage, but do not require, public consultation in the selection of the consulting engineer.

To help stimulate early public interest, the final regulations require the grantee to provide the public with an estimate of the additional per household cost of the proposed facilities. This cost can be calculated from the cost and population estimates in the biennial Needs Survey if more precise data are not available.

7. *Coordination With Other Programs.* Many commenters stressed the importance of coordinating the public participation activities in the Construction Grants Program with public participation in other programs, especially the Water Quality Management Program under 40 CFR Part 35, Subpart G.

The Agency concurs and has modified the requirement by encouraging coordination of facility planning public participation activities with those associated with other related environmental programs in the project area.

8. *Public Participation in Step 2 and 3.* Some local agencies and many public interest groups expressed approval of the language in the regulations which indicated that public participation activities in Step 2 (design) and Step 3 (construction) were grant eligible. Some commenters called for mandatory public participation requirements in Steps 2 and 3. With the exception of requirements to inform and consult with the public in the development and adoption of the user charge and industrial cost recovery systems, EPA will not impose public participation requirements in Steps 2 and 3. However, public participation activities at these stages are grant eligible provided they are included in a public participation work plan submitted by the grantee and approved by EPA.

9. *Training.* Many citizens and public interest groups supported the requirement that EPA train advisory groups established under the Full-Scale Program. Some States and local governments pointed out that they should have a role in training advisory groups because of their familiarity with local issues. EPA agrees. The final regulations require EPA to develop training materials but indicate that training would be done in cooperation with the State or grantee.

10. *EPA Technical Assistance to Implement the Regulations.* Many commenters, representing a variety of interests, urged the Agency to provide technical assistance to implement the public participation regulations.

The Agency concurs and has taken the following actions to aid States and grantees to implement their regulations:

- Made public participation activities grant eligible for construction grant funds (section 201) and State management assistance funds (section 205(g)).
- Begun development of a modular technical training program on wastewater treatment facilities planning for grantees and their advisory groups.
- Begun development of training courses on how to conduct and

evaluate public participation activities for staff from EPA, State and substate agencies.

- Initiated the development of additional guidance on the public participation regulations, including a citizen handbook.
- Assigned staff persons in each EPA regional office with the responsibility for overseeing public participation activities.
- Funded five wastewater treatment facilities planning institutes, one in each of Regions I, II, III, V, and VI, to train local citizen decision-makers.
- Included an expanded presentation on the public participation regulations in the Facilities Planning Training Course available to State and grantee, staff, consulting engineers and the public.
- Produced and made available a wide variety of technical publications on all aspects of wastewater treatment.
- Entered into an interagency agreement with the Department of Labor to provide technical assistance to small, rural communities.

NOTE: The Environmental Protection Agency has determined that this document does not contain a major proposal requiring preparation of an Economic Impact Analysis Statement under Executive Orders 11821, 11949, and 12044 and OMB Circular A-107.

Dated: February 8, 1979.

DOUGLAS M. COSTLE,
Administrator.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 35

[FRL-1256-7]

State and Local Assistance; Grants for Construction of Treatment Works; Miscellaneous Amendments

Note.—The following document was published Wednesday, June 27, 1979 at page 37584. On page 37585, certain amendment item numbers appeared incorrectly in the middle column, 14th line and in the amendatory language paragraphs beginning on that page. Therefore, this document is republished to reflect those corrected amendment item numbers.

AGENCY: Environmental Protection Agency.

ACTION: Final Rule.

SUMMARY: This amendment to the regulations governing grants for construction of treatment works under Title II of the Clean Water Act makes several miscellaneous changes. One of the changes makes final a regulation proposed on September 27, 1978; four of the changes are designed to simplify requirements and administration of the program; and the rest of the changes correct linguistic, typographical, and punctuation errors. They are being published together at this time so that they will be codified in the July 1, 1979, edition of Title 40 of the Code of Federal Regulations.

EFFECTIVE DATES: Amendment Nos. 4, 6, 8, 9, and 10 are effective October 1, 1979. The remainder are effective June 27, 1979.

ADDRESSES: Comments previously received on the proposed rules may be inspected at: Public Information Reference Unit, Environmental Protection Agency, Room 2922 Waterside Mall, 401 M Street SW., Washington, D.C. between 8 a.m. and 4:30 p.m., business days. Comments on these regulations should be addressed to: Director, Grants Administration Division (PM-216), Attention: GPPB/CG Final, Environmental Protection Agency, Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT: Mr. Harold P. Cahill, Director, Municipal Construction Division (WH-547), Environmental Protection Agency, Washington, D.C. 20460, 202-426-8986.

SUPPLEMENTARY INFORMATION: On September 27, 1978 (43 FR 44021), EPA published final revised and conformed regulations governing grants for construction of treatment works authorized under Title II of the Clean Water Act, as amended. In that same document, EPA proposed two changes to § 35.936-13 (43 FR 44048) and requested comments through November 30, 1978. EPA received 90 letters of comment on these proposed changes. The following paragraphs discuss the action we are taking in the three areas the comments addressed.

§ *35.936-13(a)(1), manufactured materials.* In the September 27, 1978, publication, EPA proposed to amend the regulation "to better achieve competition within and between types of material (particularly pipe), in the interest of affording an opportunity to compete and insuring reasonableness of prices, unless there is a sound engineering justification based upon specific site conditions which supports any restrictions upon competition."

The many comments which we received were unanimously opposed to any revision to the provision relating to manufactured materials. The comments indicate to us that virtually all the major participants in this system—grantees, engineers, and suppliers—believe that the market system is working well under the current regulation and that there is sufficient competition to ensure reasonable prices. Based on their assurance, EPA does not expect that there will be many future protests in this area and has, therefore, decided not to make the revision to the regulations which was proposed. Current requirements will continue to apply, including the basic requirement for competition (see § 35.936-3). Program Requirements Memorandum 75-5 (formerly PG 19A, August 8, 1975) states the interrelationship of these policies as follows:

> With regard to materials, such as pipe, it is not mandatory that two or more different types of material be specified; however, maximum competitive bidding is encouraged commensurate with sound engineering practice and requirements. * * * It is preferable to use performance specifications for materials based upon accepted nationally known standards such as AWWA, USAS, ASTM, AASHO [sic] and Federal specifications and standards.

§ *35.936-13(c) Experience clause restriction.* In the September 27, 1978, publication, EPA proposed to add a new final sentence to read, "No experience restriction will be permitted which unjustifiably reduces competition or innovation." EPA received only a few comments on this aspect of our proposal. The views ranged from recommending more stringent restrictions on the use of experience clauses to recommending that EPA abandon its proposal.

EPA has decided to promulgate the proposed change as a final rule with one minor word change (amendment number 9 below). In order to agree more closely with OMB's latest proposed revision of Attachment O to OMB Circular A-102, we have changed the word "unjustifiably" in the proposal to "unnecessarily" in the final. Our experience with protests under § 35.939 has indicated that this explicit statement of the Agency policy which has evolved during the protest process is needed. One of the commenters suggested that more detailed requirements be included. We believe that implementation of this policy can best be achieved on a case by case basis and we do not wish to encumber the regulations with unnecessary detail. However, we are aware of at least two types of experience restrictions which should normally be considered unnecessarily restrictive and in violation of the regulation: (1) an experience clause restriction that has the effect of permitting only one equipment manufacturer to participate in the bidding without submission of a bond or deposit; and (2) an experience clause restriction which limits competition or innovation by requiring that the previous experience be with the exact size and type of equipment specified.

§ *35.936-13(a)(1), salient requirements.* In the final rules promulgated on September 27, we revised this paragraph to require the grantee to be prepared to identify (in a bid protest or program review) the "salient requirements" of items of equipment when the grantee elects to procure by the "two brand names or equal" procedure. Although this change was published as a final rule, the Deputy Comptroller General recommended that we further amend this section to require the grantee to specify the salient characteristics in the solicitation itself (rather than just for protest or program review purposes). EPA's brand name or equal procedure in the construction grant program differs from that of other programs and agencies because of the unique statutory requirement in Section 204(a)(6) of the Clean Water Act, as amended. With respect to both the comments of the Deputy Comptroller General and the requirements of Attachment O to OMB Circular A-102, we feel that the statutorily mandated reference to two items provides for adequate identification of the salient requirements of specified items when that type of specification is used. We also find that neither our grantees nor we have the resources to develop, review and maintain up-to-date performance or guide specifications for all procurements. This is particularly true because of the rapid changes and innovations occurring in the marketplace which we don't want to stifle with outdated requirements in the specifications. Under the circumstances involved in the construction grant program, it is better to permit the definition of salient requirements by naming two technologically up-to-date and acceptable products followed by the words, "or equal." Even in the absence of developing or innovative processes or technology, the identification of two acceptable items normally would adequately indicate the acceptability of an "equal." Finally, the EPA procedure greatly minimizes the paperwork burden on grantees, consulting engineers, and others in the procurement process since most such procurements are not disputed. Therefore, we have not amended this section further.

Other Regulation Changes

Advance purchase of eligible land. EPA has approved several deviation requests to allow grantees to acquire eligible land in advance of Step 3 grant award, because of the current availability of a specific site and generally escalating property values. For these reasons, and to facilitate expeditious initiation and completion of Step 3 construction, we believe that more widespread use of this practice may be desirable. Amendments 4 and 6 allow the Regional Administrator to use his discretion in permitting grantees to proceed with land acquisition after approval of the facilities plan in advance of the normal Step 3 award, either by (1) award of a Step 3 segment consisting only of purchase of eligible land or (2) approval of the grantee's preaward cost for the purchase of eligible land. In amendment 8, compliance with the requirement for approved user charge/industrial cost recovery systems prior to step 3 grant award, operation and maintenance manuals and sewer use ordinances, is deferred until the award of the ensuing step 3 construction assistance, since the data necessary will be more readily available at that time.

Advance payment for relocation costs. On April 27, 1979, EPA published as a **Federal Register** Notice (44 FR 24828) a class deviation which permits the Regional Administrator to make advance payment after grant award for the payment of relocation costs only when he determines that it is necessary for the expeditious completion of a project. That Notice gave the legal background for this change. Amendment 10 below includes that change in the regulations and supersedes the class deviation. This amendment does not permit advance payment for the Federal share of the actual cost of eligible land.

§ 35.925-15. When the construction grant regulations were revised on September 27, 1978, the definition of industrial user was revised, in accordance with the mandate of the Clean Water Act, to exclude sources contributing 25,000 gpd or less to the treatment works. However, the regulations continued to use the phrase, "industrial user" in § 35.925-15 where it was not the intent of the statute or of the regulations to exclude any industries from the requirement that the principal purpose of the project and system be to treat domestic wastes. Therefore, amendment number 5 corrects § 35.925-15 to replace the words "industrial users" with "industrial sources" both times it is used in the section. This change of words comports with the Agency's longstanding interpretation and administration of this section, both prior to and since the September 27 publication; no change in meaning is intended. In addition, in order to comply with **Federal Register** format, numbers (1) and (2) have been changed to (a) and (b).

Appendix E. The criteria for determining innovative processes and techniques found in paragraphs 6.e.(1) and (2) both incorrectly use the term "treatment works" in referring to life cycle costs and energy saving criteria for innovative technologies. The term "treatment works" as defined in the Act and § 35.905 includes other facilities (e.g. sewers, interceptors, outfalls) in addition to treatment plants. To include the costs of these in the cost effectiveness analysis would unfairly restrict the ability of innovative systems to qualify under the criteria. Amendment 13 clarifies our intent by changing the term "treatment works" to "eligible portions of the treatment works excluding conventional sewer lines" in these two paragraphs.

Corrections. On November 30, 1978, EPA published the allotments of the fiscal year 1979 appropriation in § 35.910-10. Two typographical errors were made in that publication. Amendment 1 corrects those errors. Amendments 2, 3, 7, 11, and 12 are for the purpose of correcting typographical and punctuation errors in the September 27, 1978, publication of final regulations.

Notice. The substantive amendments (4, 6, 8, 10) which were not published as proposed rulemaking are simplifications of procedure which lessen burdens on grantees. Therefore, formal notice and opportunity for comment on these changes are unnecessary and contrary to the public interest. However, in accordance with 40 CFR 30.125, public comment on grant regulations is solicited on a continuous basis.

Effective date. Although the effective date of the substantive regulatory changes is October 1, 1978, the start of the new Federal fiscal year, and they apply to all grant assistance (including subsequent related projects) awarded on or after that date, Regional Administrators are authorized to use the more flexible procedures included in these regulations in advance of that date. Where appropriate, special grant conditions may be used.

APPENDIX B

List of Other Federal Regulations

40 CFR Part 6, "Implementation of Procedures on the National Environmental Policy Act."

40 CFR Part 25, "Public Participation in Programs under the Resource Conservation and Recovery Act, the Safe Drinking Water Act, and the Clean Water Act."

40 CFR Part 30, "General Grants Regulations and Procedures."

40 CFR Part 35, Subpart G, "Grants Water Quality Planning Management and Implementation."

40 CFR Part 125, "Modification of Secondary Treatment Requirements for Discharges into Marine Waters."

40 CFR Part 133, "Secondary Treatment Information."

40 CFR Part 403, "General Pretreatment Regulations for Existing and New Sources of Pollution."

Circular A-95, "Evaluation, Review, and Coordination of Federal and Federally Assisted Programs and Projects," Federal Register, Vol. 41 pages 2052-2065, January 13, 1976.

APPENDIX C

List of EPA Publications and Forms

Publications

Evaluation of Land Application Systems. EPA 430/9-75-001, March 1975.

Generic Facilities Plan for a Small Community: Stabilization Pond and Oxidation Ditch. February 1981, FRD-18.

Management of Small Waste Flows. EPA 600/2-78-173, September 1978.

Municipal Pretreatment Program Guidance Package.

Process Design Manual for Land Treatment of Municipal Wastewater. Technology Transfer, EPA 625/1-77-008, October 1977.

Process Design Manual for Sludge Treatment and Disposal. Technology Transfer, EPA 625/1-79-011, September 1979.

Sludge Treatment and Disposal. Technology Transfer, EPA 625/4-78-012, 2 volumes, October 1978.

Small Wastewater Systems, Alternative Systems for Small Communities and Rural Areas. January 1980, FRD-10.

(To order other EPA publications, use the order form on the following pages).

EPA Forms

Grant Agreement/Amendment. Form 5700-20.

Application for Federal Assistance. Form 5700-32.

Cost or Price Summary Format. Form 5700-41.

EPA Worksheet

Procedure and Worksheet for Determining Municipal Financial Capability. EPA Contract Number 68-01-4343, May 7, 1979.

General information and instructions

Use this form to order technical publications concerning the *U.S. EPA Construction Grants Program* for *Municipal Wastewater Treatment Works.* On the reverse of this order form, please sign, indicate type of employer and type of work, and if appropriate, include your job title.

General Services Administration, Denver, Colorado address should be on the outside. Include your return address, affix first class postage, and mail.

Inquiries concerning individual projects or localities and the *Construction Grants Program* for *Municipal Wastewater Treatment Works* should be directed to the appropriate EPA Regional Office or State Water Pollution Control Office.

Editor's note: We had to cut the publications order form described above to print it in "Facilities Planning 1981" (FP-81). The form covers five pages of information and fills pages 97-101 of "FP-81."

To order EPA publications fill out the form as detailed above and mail it to the General Services Administration address shown on page 102 of "FP-81."

1 Address *(Type or print name and address to which publications are to be mailed)*

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Organization

Address

City State Zip Code

Signature *Telephone No. and Area Code*

If you are not currently on the Construction Grants Program mailing list do you want to be added? ☐YES ☐NO

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☐ 02 Construction Contractor
☐ 03 Consulting Engineer-Private Practice
☐ 04 Consulting Firm
☐ 05 Educational Institution
☐ 06 Environmental Organization
☐ 07 Federal Government
☐ 08 Industrial Firm
☐ 09 Interstate Government
☐ 10 Labor Organization
☐ 11 Laboratory
☐ 12 Law Firm
☐ 13 Local Government
☐ 14 Manufacturer-Equipment & Supplies
☐ 15 News Media
☐ 16 Planners
☐ 17 Professional Association
☐ 18 Public Interest Organization
☐ 19 Regional Government
☐ 20 State Government
☐ 21 Trade Association
☐ 22 Utility District
☐ 23 Other *(specify)*

3 Type of Work *(X the one that best describes your work)*

☐ 01 Building Construction
☐ 02 Civil Engineering
☐ 03 Designing
☐ 04 Enforcement or Inspection
☐ 05 Environmentalist
☐ 06 Heavy and Highway Construction
☐ 07 Laboratory Technician
☐ 08 Lawyer
☐ 09 Management
☐ 10 Mechanical Engineering
☐ 11 News Dissemination
☐ 12 Other Engineering
☐ 13 Plant Superintendent
☐ 14 Process Foreman
☐ 15 Public Official—Elected or Appointed
☐ 16 Research
☐ 17 Sales or Promotion
☐ 18 Sanitary Engineering
☐ 19 Scientist—Division or System
☐ 20 Sewer Line Construction
☐ 21 Speciality Construction—Sub-Contractor
☐ 22 Student
☐ 23 Teaching
☐ 24 Treatment Plant Operator
☐ 25 Utility Construction
☐ 26 Wastewater Collection System Maintenance
☐ 27 Wastewater Treatment Plant Construction
☐ 28 Other *(specify)*
☐ 29 Library

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4 *Please send me the following publications (check appropriate boxes).*

Municipal Construction Division Series (MCD)

☐ MCD-02 *Program Requirement Memorandum—Municipal Wastewater Treatment Works Construction Grants Program.*

☐ MCD-03 *Handbook of Procedures—Construction Grants Program for Municipal Wastewater Treatment Works,* (Second Edition).

☐ MCD-04 *How to Obtain Federal Grants to Build Municipal Wastewater Treatment Works,* (updated 1980).

☐ MCD-05 *Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability,* (EPA 430/99-74-010), July 1974.

☐ MCD-06 *Protection of Shellfish Waters,* (EPA 430/9-74-010), July 1974.

☐ MCD-10 Technical Report: *Costs of Wastewater Treatment by Land Application,* (EPA 430/9-75-003), revised September 1979.

☐ MCD-13 *Alternative Waste Management Techniques for Best Practicable Waste Treatment,* (EPA 430/9-75-013), October 1975.

☐ MCD-14 *Wastewater Treatment Ponds,* (EPA 430/9-74-011), March 1976.

☐ MCD-17 Technical Report: *Cost-Effective Comparison of Land Application and Advanced Wastewater Treatment,* (EPA 430/9-75-016), November 1975.

☐ MCD-20 Technical Report: *Direct Environmental Factors at Municipal Wastewater Treatment Works,* (EPA 430/9-76-003), January 1976.

☐ MCD-21 *Disinfection of Wastewater Task Force Report,* (EPA 430/9-75-012), March 1976.

☐ MCD-23 *Construction Inspection Guide,* printed in three volumes, (EPA 430/9-76-005), July 1976.

☐ MCD-24 *Model Plan of Study, Supplement to: Guidance for Preparing a Facility Plan,* (EPA 430/9-76-004), March 1976.

☐ MCD-26 *Environmental Changes From Long-Term Application of Sewage Effluent on Land,* (EPA 430/9-78-003), March 1978.

☐ MCD-27 *V E Formats and Case Studies,* (EPA 430/9-77-029). June 1977.

☐ MCD-28 *Municipal Sludge Management Environmental Factors,* (EPA 430/9-77-004), October 1977.

☐ MCD-29 *Value Engineering Workbook for Construction Grants Projects,* (EPA 430/9-76-008), July 1976.

☐ MCD-30 *Municipal Sludge Management: EPA Construction Grants Program, an Overview of the Sludge Management Situation,* (EPA 430/9-76-009), April 1976.

☐ MCD-31 *Industrial Waste and Pretreatment in the Buffalo Municipal System,* (EPA 600/2-77-018), January 1977.

☐ MCD-32 *Energy Conservation in Municipal Wastewater Treatment,* (EPA 430/9-77-011), October 1977.

☐ MCD-33 *Application of Sewage Sludge to Cropland: Appraisal of Potential Hazards of the Heavy Metals to Plants and Animals,* (EPA 9-76-013), November 1976.

☐ MCD-34 *Wastewater: Is Muskegon's Solution Your Solution?,* (EPA 905/2-76-004), September 1976.

☐ MCD-35 *Application of Sludges and Wastewater on Agricultural Land: A Planning and Educational Guide,* reprinted with permission of Ohio State University, March 1978.

☐ MCD-36 *Sludge Handling and Disposal Practices at Selected Municipal Wastewater Treatment Plants,* (EPA 430/9-77-007), April 1977.

☐ MCD-38 *Construction Costs for Wastewater Conveyance Systems 1973-1977,* (EPA 430/9-77-014), January 1978.

☐ MCD-39 *Analysis of Operation and Maintenance Costs for Wastewater Treatment Systems,* (EPA 430/9-77-015), February 1978.

☐ MCD-40 *A History of Land Application as a Treatment Alternative,* (EPA 430/9-79-012), April 1979.

Management and Operation Series (MO)

The Municipal Construction Division, Office of Water Programs wishes to announce the availability of the following publications. This material, although widely distributed from the Municipal Operations Branch is considered timely and worthy of your consideration.

☐ MO-1 *Estimating Staffing for Municipal Wastewater Treatment Facilities,* March 1973.

☐ MO-3 *Maintaining Clean Water,* (EPA 140/8), March 1979. (pamphlet)

☐ MO-5 *Considerations for preparation of Operation and Maintenance Manuals,* (EPA 430/9-74-001).

☐ MO-6 *Estimating Laboratory Needs for Municipal Wastewater Treatment Facilities,* (EPA 430/9-74-002), June 1973.

☐ MO-7 *Maintenance Management Systems for Municipal Wastewater Facilities,* (EPA 430/9-74-004), October 1973.

☐ MO-8 *Start-up for Municipal Wastewater Treatment Facilities,* (EPA 430/9-74-008), December 1973.

☐ MO-9 *Emergency Planning for Municipal Wastewater Treatment Facilities,* (EPA 430/9-74-013), February 1974.

☐ MO-10 *Aspects of State-wide Emergency Response Programs for Municipal Wastewater Treatment Facilities,* (EPA 430/9-74-014), March 1974.

☐ MO-11 *Anaerobic Sludge Digestion—Operations Manual,* (EPA 430/9-76-001), February 1976.

☐ MO-12 *Package Treatment Plants—Operations Manual,* (EPA 430/9-77-005), April 1977.

☐ MO-14 *Process Control Manual for Aerobic Biological Wastewater Treatment Facilities,* (EPA 430/9-77-006), March 1977.

☐ MO-15 *Operations Ponds Stabilization Manual,* (EPA 430/9-77-012), August 1977.

☐ MO-16 *Field Manual for Performance Evaluation and Troubleshooting at Municipal Wastewater Treatment Facilities,* (EPA 430/9-78-001), January 1978.

☐ MO-19 *Sludge Handling and Conditioning,* (EPA 430/9-78-002), February 1978.

☐ MO-21 *Inspector's Guide for Evaluation of Municipal Wastewater Treatment Plants,* (EPA 430/9-79-010), April 1979.

☐ MO-22 *Management of Small-to-Medium Wastewater Treatment Plants,* (EPA 430/9-79-013), July 1979.

☐ MO-23 *A Planned Maintenance Management System for Municipal Wastewater Treatment Plant,* (EPA 600/2-73-004), November 1973.

☐ MO-24 *Evaluation of Flow Equalization in Municipal Wastewater Treatment,* (EPA 600/2-79-096), May 1979.

☐ MO-25 *Chemical Aids Manual for Wastewater Treatment Facilities,* (EPA 430/9-79-018), December 1979.

NOTE: This list is subject to the Freedom of Information Act.

☐ MCD-41 *An Approach for Comparing Health Risks of Wastewater Treatment Alternatives: A Limited Comparison of Health Risks Between Slow Rate Land Treatment and Activated Sludge Treatment and Discharge,* (EPA 430/9-79-009), September 1979.

☐ MCD-42 *Upgrading Trickling Filters,* (EPA 430/9-78-004), June 1978.

☐ MCD-43 *Federal Guidelines: State and Local Pretreatment Programs,* three volumes, (EPA 430/9-76-017a, b, c), January 1977.

☐ MCD-44 *Construction Grants Program Information—Industrial Cost Recovery Systems,* November 1976.

☐ MCD-47 *All You Need to Know About U.S. Environmental Protection Agency Sewage Treatment Construction Grants,* booklet, October 1976.

Please Note: This publication was announced previously but due to unforseen circumstances printing was delayed.

☐ MCD-53 *Innovative and Alternative Technology Assessment Manual,* (EPA 430/9-78-009), February 1980.

This manual has been designed to aid Federal and State review authorities in the administration of the innovative and alternative requirements of the Construction Grants Program as well as providing the same basic methodological information to the engineering and planning personnel preparing facilities plans.

☐ MCD-54 *Wastewater Stabilization Pond Linings,* (reprint of USA CRREL, SR 78-28), November 1978.

☐ MCD-60 *Energy Requirements for Small Flow Wastewater Treatment Systems,* (reprinted with permission of USA CRREL, SR 79-7), April 1979.

☐ MCD-61 *Evaluation of Sludge Management Systems: Evaluation Checklist and Supporting Commentary,* (EPA 430/9-80-001), October 1979.

☐ MCD-62 *NPDES Compliance Biomonitoring Inspection Manual,* October 1979.

☐ MCD-63* *Sludge Recycling for Agricultural Use,* (EPA 430/9-80-008), March 1980.

This color brochure provides insight into how several communities have successfully developed sludge management programs that involve the recycling of municipal sludge for agricultural use.

☐ MCD-64 *Innovative and Alternative Technology—A New Approach to an Old Problem,* March 1980, (a brochure).

☐ MCD-66 *Assessment of Current Information on Overland Flow Treatment of Municipal Wastewater,* (EPA/9-80-002), May 1980.

☐ MCD-67* *Aquaculture Systems for Wastewater Treatment: Seminar Proceedings and Engineering Assessment,* (EPA 430/9-80-006), September 1979.

This publication contains an engineering assessment and the proceedings of a seminar held at the University of California-Davis on September 11-12, 1979, on the use of various aquaculture systems (wetland processes, aquatic processes) for the treatment of municipal wastewater.

☐ MCD-68* *Aquaculture Systems for Wastewater Treatment: An Engineering Assessment,* (EPA 430/9-80-007), June 1980.

This report contains the results of an engineering assessment of the current status of aquaculture technologies for wastewater treatment.

☐ MCD-69* *Recommendations from Value Engineering Studies in Wastewater Treatment Works,* (EPA 430/9-80-010), September 1980.

This publication summarizes the best ideas/recommendations from 93 value engineering (VE) reports which were completed under the EPA mandatory VE program.

☐ MCD-72* *A Guide to Regulations and Guidance for the Utilization and Disposal of Municipal Sludge,* (EPA 430/9-80-015), September 1980.

This document provides a concise outline of the different Federal regulations and guidelines that pertain to each alternative for sludge utilization and disposal and points out how these regulations and guidelines should be addressed.

***THESE PUBLICATIONS HAVE NOT APPEARED ON PREVIOUS APPLICATION FORMS.**

Facility Requirements Series (FRD)

☐ FRD-2 *1978 Needs Survey—Conveyance and Treatment of Municipal Wastewater in Summaries of Technical Data,* (EPA 430/9-79-002), February 1979.

☐ FRD-5 *Environmental Assessment of Construction Grant Projects,* (EPA 430/9-79-007), January 1979.

☐ FRD-6 *Municipal Wastewater Management—Citizen's Guide to Facility Planning,* (EPA 430/9-79-006), January 1979.

☐ FRD-7 *Municipal Wastewater Management—Public Involvement Activities Guide,* (EPA 9-79-005), January 1979.

☐ FRD-8 *Proceedings—National Conference on Water Construction and Municipal Wastewater Flow Reduction,* November 28 & 29, 1978—Chicago, Ill. (EPA 430/9-79-015), August 1979.

☐ FRD-9 *Determining Wastewater Treatment Costs for Your Community,* October 1979.

☐ FRD-10 *Small Wastewater Systems—Alternative Systems for Small Communities and Rural Areas,* January 1980. (foldout)

☐ FRD-11* *Construction Costs for Municipal Wastewater Treatment Plants: 1973-1978,* (EPA 430/9-80-003), April 1980.

☐ FRD-12* *The Alternative is Conservation.*

This handbook demonstrates water conservation techniques and devices; copies of an accompanying film or video cassette are available for loan or purchase from the following address:

User
30 Bates Road
Watertown, MA 02172

☐ FRD-19* *1978 Needs Survey—Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities,* (EPA 430/9-81-001), February 1980.

***THESE PUBLICATIONS HAVE NOT APPEARED ON PREVIOUS APPLICATION FORMS.**

Miscellaneous

☐ UNA-11.0* *Making Water and Sewer Programs Work,* December 1978.

☐ UNA-12.0* *Water Wheel—Your Guide to Home Water Conservation.*

☐ UNA-15.0* *Federal Financial Assistance for Pollution Prevention and Control.*

This booklet describes the assistance programs available to affected firms, farms, trade associations, unions, non-profit development organizations, and State and local governments seeking to reduce the sometimes disruptive effect of environmental regulations on individual firms and local economics.

NOTE: A publication entitled, "On-Site Wastewater Treatment and Disposal Systems" (EPA 625/1-80-012) may be of interest to your program.

This document provides information on generic types of on-site wastewater treatment and disposal systems. The design information presented is intended as technical guidance reflective of sound professional practice. The intended audience for the manual includes those individuals in design, construction, operation, maintenance and regulation of on-site systems.

Please contact the following office to order this material and cite "1012" as a distribution number.

U.S. EPA
Center for Environmental Research Information
Cincinnati, Ohio 45268
Telephone Number (513) 684-7394

***THESE PUBLICATIONS HAVE NOT APPEARED ON PREVIOUS APPLICATION FORMS.**

Effective and economic treatment of municipal wastewater is a critical element in the effort to clean — and keep clean — the waterways of the United States. The Municipal Construction Division, Office of Water Programs Operations, U.S. Environmental Protection Agency, has issued a wide range of technical publications on municipal wastewater treatment. We will be happy to send you copies of any publications you might need to assist you.

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APPENDIX D

PRMs and POMs Discontinued or Canceled Upon Publication of "Facilities Planning 1981"

PRMs Canceled:

The following PRMs are canceled for the reasons specified.

75-1	Use of Revenue Sharing Funds for Waste Treatment Projects. Policy no longer valid. Superseded by 31 CFR 51.40 and section 4 of P.L. 94-488.
75-2	Experience Clauses for Equipment Suppliers. Superfluous; policy set forth more completely at 40 CFR 51.40, 35.936-13 (c).
75-3	Waste Stabilization Ponds. Superfluous; policy set forth in 40 CFR 133.102(c).
75-4	Standarized Construction Grant Documents. Guidance no longer useful; contained in 40 CFR 35.938-8.
75-5	Nonrestrictive Specification. Covered by 40 CFR 35.936-13(a) and (b).
75-7	Sewer System Evaluation and Rehabilitation. Covered by 40 CFR 35.927, 927-1 through 927-5.
75-8	Flood Disaster Protection Act of 1973. Superseded by PRM 76-5.
75-9	Supplement to PG No. 25; Flood Disaster Protection Act of 1973 (P.L. 93-234). Superseded by PRM 76-5.
75-28	Flood Insurance Requirements Effective July 1, 1975. Superseded by PRM 76-5.
75-10	User Charges and Industrial Cost Recovery System.
75-19	Canceling PG-28 - User Charges and Industrial Cost Recovery (ICR) System. Superseded by PRM 76-5. New ICR systems eliminated by P.L.96-483.
75-12	Obligation, Recovery and Reallotment of Contract Authority Funds. Guidance outdated.
75-15	Class Deviation - Use of Force Account Work on Construction Grants Projects. Grants deviation from outdated force account regulations (40 CFR 35.936-2(a) 1972 edition). New procedures are set forth at 40 CFR 35.936-14.

Appendix D (continued)
PRMs and POMs Discontinued or Canceled, Etc.
PRMs Canceled (continued)

75-16 Title II Regulations Concerning Reserve for Step 1 and Step 2 Projects.
Superseded by 40 CFR 35.915-1(d).

75-20 User Charge Systems.
Covered by revised regulations, 40 CFR 35.925-11(b), 35.925-13.

75-21 Overruns, Reserves and Priority Lists.
Subject matter no longer an issue; also, more appropriately Program Operations Memorandum (POM) material.

75-22 Policy Re: Retention of Payments.
Superfluous, policy contained in 40 CFR 35.938-7.

75-23 Escalation Clauses in Construction Grants Projects.
Information obsolete.

75-33 Discount Rate. Current and future discount rate PRMs will specifically supersede prior discount rate PRMs and include a table listing the rate for previous years.
78-2 Discount Rate.
79-4 Discount Rate.
80-1 Discount Rate.

75-34 Grants for Treatment & Control of Combined Sewer Overflows & Stormwater Discharges.Section on stormwater treatment superseded by section 211(c) of Act & 40 CFR 35.925-21 which contain a flat prohibition against funding of separate stormwater treatment projects. Remainder of PRM integrated into "Facilities Planning 1981."

75-40 Priority List Supplement to FY 1977 Construction Grants Guidance.

77-7 Management of State Priority Lists.

78-5 Interim Management of FY 1978 State Priority Lists under the 1977 Amendments.

78-13 Interim Priority List Guidance for the Development and Management of FY 1979 State Priority Lists.

79-6 Priority List Guidance for the Development and Management of FY 1980 State Project Priority Lists.

The above five PRMs overlap, and policy in each subsequent PRM at least partially supersedes the previous issuance. Future priority list guidance will be issued in POMs.

Appendix D (continued)
PRMs and POMs Discontinued or Canceled, Etc.
PRMs Canceled (continued)

76-1 Construction Grant Programs Issuance.

76-2 Cancelation of Certain Program Guidance Memoranda (PGM).
Superseded by PRM 81-1.

76-4 Coordination of Construction Grants Program with EPA-Corps of Engineers Section 404/Section 10 Permit Programs
Policy integrated into Constructon Grants Handbook of Procedures and "Facilities Planning 1981."

77-6 Easements.
Expressly superseded by PRM 80-3.

77-8 Funding of Sewage Collection Projects.
Superseded by PRM 78-9.

78-3 Buy American.
Expressly superseded by PRM 80-5.

78-6 ICR - Interim Guidance.
All provisions have been incorporated into regulations, intended only as interim guidance.

78-7 Combined Step 2 & 3 Construction Grants Awards.
Superseded by 40 CFR 35.903(b) & 40 CFR 35.909. See 43 Federal Register 44036.

80-6 Retroactive Application of Program Requirements.
Limitation now contained in FY81 appropriation bill, P.L.96-526.

PRMs Integrated into "Facilities Planning 1981."

75-26 Consideration of Secondary Environmental Effects in the Construction Grants Process.

75-27 Field Surveys to Identify Cultural Resources Affected by EPA Construction Grants Projects.

75-31 Facilitating EIS Preparation with Joint EIS/Assessments (Piggybacking).

75-32 Compliance with Title VI in the Construction Grants Program.

75-38 Relationship Between 201 Facility Planning and Water Quality Management (WQM) Planning.

76-3 Presentation of Local Government Costs of Wastewater Treatment Works in Facility Plans.

Appendix D (continued)
PRMs and POMs Discontinued or Canceled, Etc.
PRMs Integrated in to "Facilities Planning 1981" (continued)

77-4 Cost Allocations for Multiple Purpose Projects.

78-9 Funding of Sewage Collection System Projects. (NOTE: 40 CFR 35.925-13 will be modified to reflect policy as conveyed in Facilities Planning 1981.)

78-10 Infiltration/Inflow.

79-3 Revision of Agency Guidance for Evaluation of Land Treatment Alternatives Employing Surface Application.

79-8 Small Wastewater Systems.

75-34 Grants for Treatment and Control of Combined Sewer Overflows and Stormwater Discharges.

76-4 Coordination of Construction Grants Program with EPA-Corps of Engineers Section 404/Section 10 Permit Programs.

PRMs Partially Canceled

(The portions of these PRMs that relate to Step 1 facilities planning have been incorporated into Facilities Planning 1981, but portions remain in effect for Steps 2 and 3.)

78-1 Erosion and Sediment Control in the Construction Grants Program Policy as it Pertains to Facilities Planning,

76-5 Flood Insurance.

POMs Partially Canceled:

77-2 Discount Rate.

78-4 Construction Grants Funding for Lab Testing Equipment.

80-3 Regarding Use of a Computer Assisted Procedure for the Design and Evaluation of Wastewater Treatment Systems (CAPDET) in Step 1 Facilities Planning.

80-4 The Effect of the Hazardous Waste Regulations on Management of Municipal Sewage Sludge.

APPENDIX E

EPA Offices

REGION 1

John F. Kennedy Federal Building
Room 2203
Boston, Mass. 02203
Phone: FTS - 223-7210
Commercial: 617-223-7210
Hours: 8:00-5:00

States in Region:
- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Vermont
- Rhode Island

REGION II

26 Federal Plaza
Room 900
New York, New York 10007
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Commercial: 212-264-2525
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- New York
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REGION III

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- Pennsylvania
- Virginia
- West Virginia
- District of Columbia*

REGION VI

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Dallas, Texas 75270
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- Louisiana
- New Mexico
- Oklahoma
- Texas

REGION VII

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Kansas City, Missouri 64106
Phone: FTS - 758-5493
Commercial: 816-374-5493
Hours: 7:00-4:30

States in Region:
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- Kansas
- Missouri
- Nebraska

REGION VIII

1860 Lincoln Street
Denver, Colorado 80295
Phone: FTS - 327-3895
Commercial: 303-837-3895
Hours: 7:00-5:30

States in Region:
- Colorado
- Montana
- North Dakota
- South Dakota
- Utah
- Wyoming

*Applicant same as State

Appendix E (continued)
EPA Offices

REGION IV

345 Courtland Street, N.E.
Atlanta, Georgia 30308
Phone: FTS - 257-4727
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- Florida
- Georgia
- Kentucky
- Mississippi
- North Carolina
- South Carolina
- Tennessee

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Chicago, Illinois 60604
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- Indiana
- Michigan
- Minnesota
- Ohio
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San Francisco, California 94105
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- Arizona
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- Hawaii
- Nevada
- American Samoa*
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Seattle, Washington 98101
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Commercial: 206-442-1220
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States in Region:
- Alaska
- Idaho
- Oregon
- Washington

* Applicant same as State

EPA Small Wastewater Flows
Clearinghouse
West Virgina University
Morgantown, WV 26506 (800) 624-8301

Innovative and Alternative
Technology Clearinghouse
Municipal Research Laboratory
26 W. St. Clair
Cincinnati, OH 45268 (513) 684-7611

Contact State office or EPA regional office for information on other State and Federal agencies.

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Key

- "1.1", e.g., refers to section 1.1 of Facilities Planning 1981.
- "35.917-1(f)", e.g., refers to the Construction Grants Regulations in Title 40, Part 35, Subpart E of the Code of Federal Regulations.
- "Appx.E.4", e.g., refers to Appendix E, paragraph 4 of the Construction Grants Regulations.
- "appx. A" refers to appendix A of Facilities Planning 1981.
- "Part 25", e.g., refers to Part 25 of Title 40 of the Code of Federal Regulations.
- "1508.5", e.g., refers to subpart 5 of Part 1508 of Title 40.
- "(CWA 303(e))", e.g., refers to the Clean Water Act, section 303(e)
- "41 FR 6190", e.g., refers to volume 41 of the Federal Register, page 6190.
- "15 WCPD 1353", e.g., refers to volume 15 of the Weekly Compilation of Presidential Documents, page 1353.
- an underlined reference includes a definition.

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